# UK Professional Standards Framework (UKPSF) Dimensions of the Framework for Doctoral Supervisors

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The UKPSF sets out the higher education sector's professional standards for teaching and supporting learning, and is used as a developmental tool to enhance practice and, through the provision of evidence of alignment, to gain professional recognition in terms of Fellowship of the HEA. The aim of the present guide is to show how the Descriptors can be interpreted in terms of doctoral supervision. It was formulated in two stages; the first involved defining the typical roles/career stages for doctoral supervisors while the second involved showing how the associated professional standards can be interpreted in terms of doctoral supervision.

Doctoral supervisors normally occupy the roles, or are at the career stages, defined in Descriptors 2 and 3 of the UKPSF. Descriptor 2 incorporates established practitioners with extensive roles in learning and teaching which will include all of those acting as principal or second/associate supervisors. Descriptor 3 incorporates experienced practitioners who have roles in co-ordinating, managing, supporting, and mentoring others in relation to learning and teaching. Many staff, for example directors of doctoral training centres/postgraduate studies/research degree programmes, mentoring research supervisors, and postgraduate research tutors, undertake these functions in relation to doctoral supervision and meet the D3 criteria.

The guide starts by defining roles and/or typical career stages for doctoral supervisors at D2 and D3 so that supervisors can locate themselves in the relevant category. Bearing in mind that they may wish to use the guide for recognition purposes, the HEA's requirements for Fellowship (D2) and Senior Fellowship (D3) respectively are then reproduced. The core of the guide is an interpretation of the dimensions in terms of doctoral supervision. For each, there is a general overview, a list of typical examples of practice, and a brief outline of the supporting literature.

## Roles and/or typical career stages for Doctoral Supervisors

At D2, individuals should be able to provide evidence of broadly based effectiveness in supervising doctoral students. Such individuals are likely to be members of one or more supervisory teams. Typically those would include:

- Academics and researchers with supervisory responsibilities, e.g. as principal and/or secondary/associate supervisors;
- Experienced supervisors relatively new to supervising doctoral students in the relevant national higher education system.

At D3, individuals should be able to provide evidence of a sustained record of effectiveness in co-ordinating, supporting, managing and/or mentoring of others in relation to doctoral supervision. Such individuals are likely to lead or be members of established academic teams. Typically those would include:

- Experienced staff who play roles in supporting and mentoring fellow-supervisors;
- Experienced staff able to demonstrate impact and influence through, for example, responsibility for leading, managing, co-ordinating, or organising doctoral supervision in faculties, departments, research institutes and research group.

**This guidance addresses the following questions:**
1. What are the UKPSF Dimensions of the Framework?
2. How do the Dimensions relate to each other?
3. How can I demonstrate my engagement with the Areas of Activity?
4. How should I show my understanding of the appropriate Core Knowledge?
5. How should I demonstrate my commitment to the Professional Values?

# 1. What are the UKPSF Dimensions of the Framework?

The UKPSF identifies the diversity of higher education teaching and support roles and environments; this diversity is reflected and expressed in the Dimensions of the Framework.
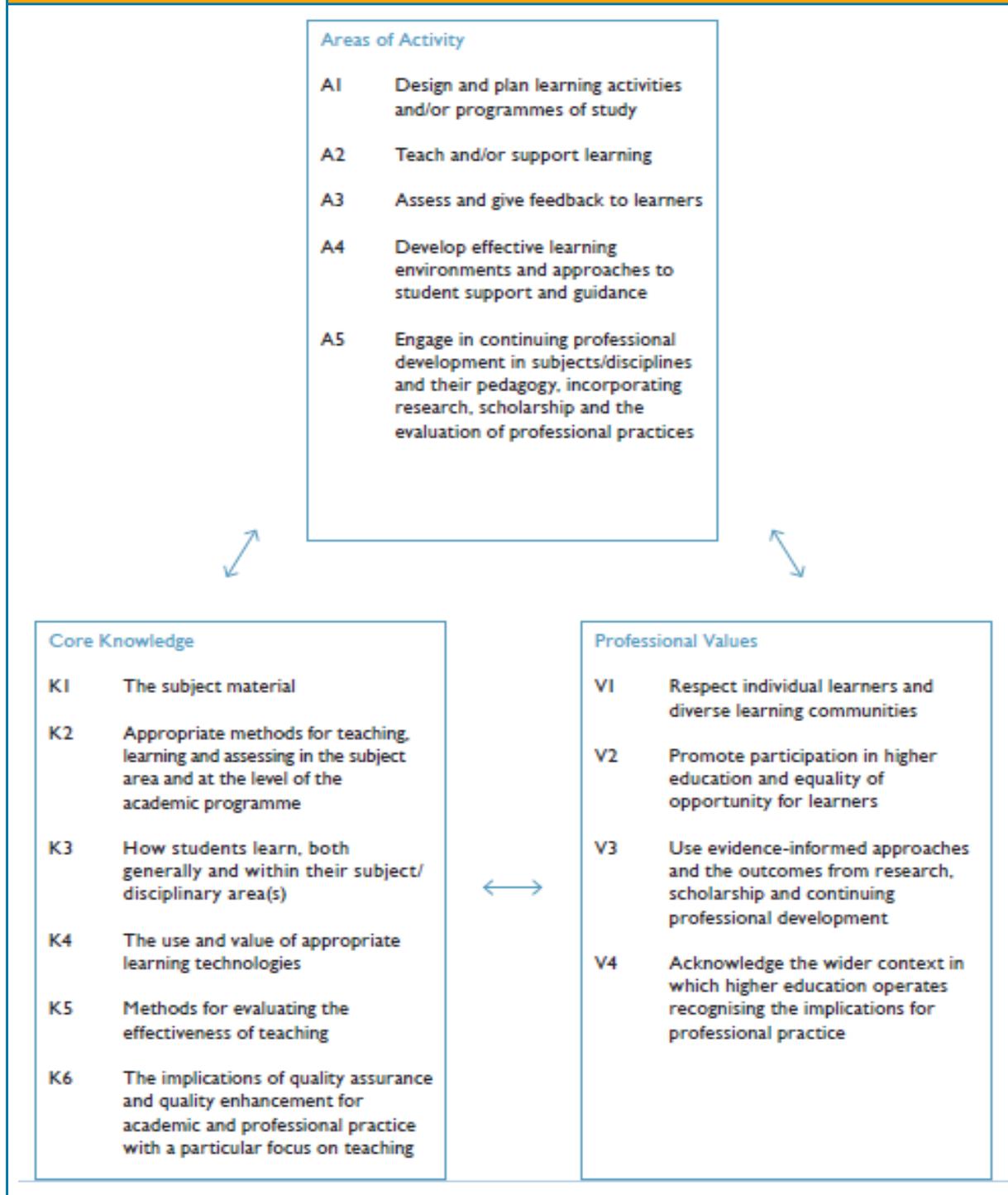
The Dimensions of the Framework are outlined in three key sets as follows:
- **Areas of Activity (A)** which you undertake when teaching, supporting and facilitating learning in higher education;
- **Core Knowledge (K)** which is needed to carry out the areas of activity;
- **Professional Values (V)** which you should embrace and demonstrate in your teaching or support of teaching.

# 2. How do the Dimensions of the Framework relate to each other?

Each of these three sets of the Dimensions is subdivided into statements: five Areas of Activity, six aspects of Core Knowledge and four Professional Values. Combined they cover the complexity of professional roles in higher education, be it teaching, student support or the supervision of research students.

## The UKPSF Dimensions of the Framework

### Areas of Activity

A1  Design and plan learning activities and/or programmes of study

A2  Teach and/or support learning

A3  Assess and give feedback to learners

A4  Develop effective learning environments and approaches to student support and guidance

A5  Engage in continuing professional development in subjects/disciplines and their pedagogy, incorporating research, scholarship and the evaluation of professional practices

### Core Knowledge

K1  The subject material

K2  Appropriate methods for teaching, learning and assessing in the subject area and at the level of the academic programme

K3  How students learn, both generally and within their subject/disciplinary area(s)

K4  The use and value of appropriate learning technologies

K5  Methods for evaluating the effectiveness of teaching

K6  The implications of quality assurance and quality enhancement for academic and professional practice with a particular focus on teaching

### Professional Values

V1  Respect individual learners and diverse learning communities

V2  Promote participation in higher education and equality of opportunity for learners

V3  Use evidence-informed approaches and the outcomes from research, scholarship and continuing professional development

V4  Acknowledge the wider context in which higher education operates recognising the implications for professional practice

In the sections below, each of the fifteen statements is explored in more detail and examples are provided of the types of evidence that might demonstrate how your experience relates to them.

Your level of engagement with the three sets of Dimensions will depend on the category of Fellowship for which you are applying. HEA Fellowship is aligned to the UKPSF descriptors that outline the key characteristics of four broad categories of typical teaching and support roles:

- Associate Fellow – Descriptor 1 (D1)
- Fellow – Descriptor 2 (D2)
- Senior Fellow – Descriptor 3 (D3)
- Principal Fellow – Descriptor 4 (D4)

**In this document, guidance is provided for those whose roles align to the Descriptor 2 and Descriptor 3 categories.**

**Requirements for professional recognition at D2 (Fellowship) and D3 (Senior Fellowship)**

At D2, individuals should be able to demonstrate a broad understanding of effective approaches to doctoral supervision as key contributions to high quality student learning. Individuals should be able to provide evidence of:

- Successful engagement across all five Areas of Activity.
- Appropriate knowledge and understanding across all aspects of Core Knowledge.
- A commitment to all the Professional Values.
- Successful engagement in appropriate teaching practices related to the Areas of Activity.
- Successful incorporation of subject and pedagogic research and/or scholarship within the above activities, as part of an integrated approach to academic practice.
- Successful engagement in continuing professional development in relation to teaching, learning, assessment and, where appropriate, related professional practices.

At D3, individuals would be expected to provide evidence of the above and additionally of their roles in the

- Successful co-ordination, support, supervision, management and/or mentoring of others (whether individuals and/or teams) in relation to teaching and learning.

# 3. How can I demonstrate my engagement with the Areas of Activity?

There are five Areas of Activity:
- A1: Design and plan learning activities and/or programmes of study.
- A2: Teach and/or support learning.
- A3: Assess and give feedback to learners.
- A4: Develop effective learning environments and approaches to student support and guidance.
- A5: Engage in continuing professional development in subjects/disciplines and their pedagogy, incorporating research, scholarship and the evaluation of professional practices.

You need to provide evidence of successful engagement with these Areas of Activity.

- For D1 you need to provide evidence of engagement with at least two of the five Areas of Activity.
- For D2 and D3 you need to provide evidence of engagement with all five Areas of Activity.

# A1    Design and plan learning activities and/or programmes of study

Overview
At D2, supervisors would be expected to be involved in designing and planning activities to induct their doctoral students into research. In professional and practice-based doctorates, these would include activities to support them to understand their practice as research. Whereas in some disciplines it is customary for students to be recruited to undertake a pre-defined research topic, in others they have greater scope and one of the key tasks of supervisors is to design and plan activities to support them to choose a topic which has the potential to make a contribution to knowledge and understanding. Supervisors may also need to design activities to support students to develop a detailed research proposal and a research plan. Finally, one of the key expectations is that supervisors will to be able to design and plan supervisory meetings in order to support their students to progress their research projects.

Supervisors in the D3 category would be expected to have played roles in mentoring and supporting less experienced supervisors in their design and planning activities and/or in designing and planning doctoral programmes in whole or part.

Typical examples
At D2 evidence of designing and planning:

- learning activities to develop students' understanding of research;
- where appropriate, of activities to support students to choose a suitable topic, e.g. giving them the criteria and asking them to self-evaluate topics;
- activities to support students to develop research proposals and research plans;
- supervisory meetings to support students to progress their research projects.

At D3 evidence of:

- mentoring or supporting less experienced supervisors to undertake the above;
- co-ordinating, supporting or managing or leading the design of doctoral programmes or of components of doctoral  programmes, for example induction and research training workshops or modules.

Supporting literature
Students often have conceptions of research which are far removed from those of their supervisors (Kiley and Mullins 2005, Meyer et al 2005, 2007, Meyer 2007, Stubb et al 2012, Holbrook et al 2014). For this reason, there is a need to calibrate expectations at the start of the doctoral degree by, for example, activities such as sharing 'warts and all' accounts of supervisors' own research experiences. This can be particularly crucial in the cases of practice-based doctorates, where students may have difficulties in relating their practice to their research (Hockey 2003, Hockey and Allen-Collinson 2005, Paltridge et al 2011).

Students may need to be supported to choose a topic for their doctoral research, which can involve iterations of discussing potential ones, inviting them to self-evaluate their suitability, producing reports, and giving feedback (Taylor and Beasley 2005, Kiley 2009).

The development of research proposals and plans can be difficult for students as they may have little or no experience and supervisors need to offer support, for example by showing them exemplars (Taylor and Beasley 2005). For research plans, Delamont et al (2004) have devised a very useful activity involving supervisors showing students deliberately unrealistic timetables for research projects and inviting them to find the flaws.

Supervisory meetings need to be designed purposefully to support students to progress their research and to have an agenda and include clear objectives, processes, outcomes, and arrangements for recording (see Delamont et al 2004, Eley and Murray 2009).

## A2  Teach and/or support learning

Overview

In the same way as they have different approaches to lecturing or small group teaching relating to student needs, supervisors have different approaches to supervision which may or may not match the needs of individual students. Supervisors need to be aware of the various approaches, and to be able to adapt them in relation to student needs. Such needs should, of course, change over the course of doctoral studies as students develop into independent researchers, and again supervisors have to be aware of the issues and be willing to allow students greater autonomy. But they may still need support, particularly in relation to encouraging them to write and in developing their writing skills. It is crucial that these have been mastered before the final stages in which students complete their thesis, dissertation, artefact(s), exegesis, and/or contributory publications, when they may need additional support from supervisors to produce the final submission. In systems where team supervision is the norm, supervisors need to recognise the potential pitfalls and to develop strategies to secure the quality of the student learning experience.

Typical examples
At D2 evidence of:

- awareness of different approaches to supervision and their relationship to student needs;
- adapting approaches  to meet the differing needs of individual students;
- maintaining alignment of approaches as the needs of students change and evolve over the course of the research project;
- encouraging students to write early and regularly;
- supporting students to complete their projects;
- where team supervision is the norm, the development of strategies to secure the quality of the student learning experience.

At D3 evidence of:

- mentoring or supporting less experienced supervisors in undertaking the above.

Supporting literature
In the literature, there are a number of studies of supervisors' preferred approaches to supervision and of the linkages between these and the needs of students (see for example Gatfield 2005, Deuchar 2008, Egan et al 2009, Lee 2012). The last is particularly useful as it contains a self-evaluation questionnaire to assist supervisors to identify their preferred approaches.

Similarly, there are studies of the ways in which supervisory approaches need to become more 'hands-off' over time as students become more independent as researchers (see for example Gurr 2001, Baker and Pifer 2011, McAlpine, 2013, Benmore 2014, de Kleijn et al 2015).

However, one area in which they may need continuing encouragement is in writing up as they go. Students often assume that writing can be left to the end, but it is important that they are encouraged to write early and regularly (see Kamler and Thomson 2006, Woolf 2010, McAlpine 2013, Kiley 2015).

As students move towards completion of their projects, supervisors may need to offer support, including advising them when they have done enough and in how to go about producing the final work to be submitted for examination (see for example Kiley 2009, Lindsay 2015).

Whereas historically, supervision involved a one-to-one relationship between supervisor and student, in many cases team supervision is now the norm. While this can bring considerable benefits, it can also lead to conflict where supervisors have different expectations of the aims of the research or how it should be undertaken and this can have a negative impact on the student learning experience (see Guerin et al 2011, Manathunga 2012, Lahenius and Ikavalko 2014, Guerin and Green 2015). Supervisors need to be aware of these issues and to have strategies to manage them, for example agreeing expectations at the start and

reviewing co-supervision with the student at regular intervals over the course of the project (Taylor and Beasley 2005).

## A3    Assess and give feedback to learners

Overview
One of, if not the, most important functions of supervisors is to give students effective feedback on their work, for example on experimental design or documentary or data analysis or artefacts.

Students also need to know about assessment criteria and examination requirements and, in systems which have an oral examination, be given the opportunity to have a practice viva. Following the real viva, supervisors may have to advise students on how to proceed in cases where the examiners have recommended revision and/or resubmission. While for obvious reasons supervisors do not normally act as examiners of their own doctoral students, they may act as internal or external examiners of other students and in these capacities may assess and give feedback on submissions for doctoral degrees.

Typical examples
At D2 evidence of:

- giving students timely and constructive feedback on their work which is clear and actionable;
- giving students feedback on their writing;
- familiarising students with assessment criteria and examination requirements;
- supporting students to prepare for examination including, where appropriate, offering the opportunity for a practice viva;
- supporting students after the examination including, where appropriate, advising on major revisions and resubmission;
- acting as an internal or external examiner or as an independent chair.

At D3 evidence of:

- mentoring or supporting less experienced supervisors and/or examiners in undertaking the above.

Supporting literature
In giving feedback to students, supervisors have to bear in mind the need for it to be timely (delays can hold up the whole research project) and constructive (students' self-esteem is on the line and negative feedback can damage their confidence or worse) (see Halse 2011, Wang and Lee 2011, Aichison and Mowbray 2013). Feedback should also give clear messages to students and, where appropriate, be actionable (see McAlpine 2013).

Feedback should also include students' writing. In order to produce a doctorate, students have to learn the skills of producing academic writing in their discipline(s) and the supervisor has a key role to play in giving feedback and supporting development (see Diezman 2005, Kamler and Thomson 2006, Lee and Murray 2013).

At the start of their studies, students may have little or no understanding of what is required to achieve a doctorate, and feedback also needs to help them to understand the assessment criteria for the award and the requirements for examination (see Wellington 2010).

The doctoral examination involves submission of a thesis or dissertation or publications or artefacts to examiners. In a few countries, this is the only mode of examination, but in most there is also an oral or viva in which students have to defend their theses before examiners. Students can be very apprehensive of this ordeal and it can be helpful to explain what is involved and, if appropriate, to offer them the opportunity to practice in a 'mock viva' (see Green and Powell 2005, Murray 2009).

Following the viva, examiners will make their recommendations which, in most cases, will be for an outright pass or a pass subject to making minor revisions, usually in the form of corrections of spelling and grammar. However, in some cases, examiners will ask for more substantive revisions and for the work to be resubmitted, which can involve supervisors in discussing changes with students, reading revised materials, and advising on resubmission (see Taylor and Beasley 2005).

Examiners of doctoral degrees need to understand the criteria for award which will vary between disciplines (see Lovitts 2007), the type of doctorate and in some higher education systems between institutions (see Tinkler and Jackson 2004). They need to be able to conduct examinations fairly (see Mullins and Kiley 2002, Kiley and Mullins 2004) and make appropriate recommendations (see Pearce 2009).

## A4 Develop effective learning environments and approaches to student support and guidance

Overview
Supervisors need to ensure that their students have adequate resources to undertake their research project, otherwise completion can be delayed. They also need to ensure that students are aware of sources of academic support and that they are fully informed about issues relating to research integrity and associated matters. In their private lives students are subject to life-changing experiences, and it is important that supervisors empathise with them and, where appropriate, know where to refer them for personal support. Of course, for personal and other reasons, students may fall behind in their studies and supervisors need to understand the causes and be able to support them to progress. One of the major causes of falling behind is a lack of funding, and supervisors may have to support students to apply for positions and grants.

Typical examples
At D2 evidence of:

- ensuring that students have adequate resources to undertake their research projects including study facilities, storage facilities, IT, and where appropriate, equipment, and in the case of practice-based doctorates, workshop facilities, library;
- ensuring that students are fully informed about issues relating to research integrity;
- empathising with students facing personal issues and being aware of institutional support services to which they can be referred for help;
- understanding why students may fall behind and supporting them to progress;
- where appropriate, assisting students in applying for positions and grants;
- engagement with Careers Service.

At D3 evidence of:

- mentoring or supporting less experienced supervisors in undertaking the above.

Supporting literature
Supervisors need to ensure that, as far as possible, the resources required for students to undertake their projects are in place at the start or will be when they are needed; there have been cases where promised access has not materialised and students have been left for months kicking their heels (see Taylor and Beasley 2005).

Particularly in view of recent widespread allegations of academic and research misconduct in doctoral studies (see for example Nilstrum et al 2010, Ospian 2012), supervisors should ensure that their students are fully informed about issues relating to research integrity (see Mahmud and Bretag 2013).

Students may experience a range of life-changing experiences during their studies, including pregnancy, illness, divorce, the death of family or friends (see for example Wright 2003). Supervisors need to be

empathetic towards students undergoing such experiences and, where appropriate, know where to refer them for professional support (see Pearson 2012).

Such life-changing experiences are among the reasons why students delay submission or fail to complete. Others include isolation which supervisors may be able to counter by supporting students to integrate academically and socially into the research milieu (see Lovitts 2001, Golde 2005, Gardner 2008a).

Of all the factors causing delay or drop-out, numerous studies (Bair and Hayworth 2004, Kim and Otts 2010, Ampar and Jaegar 2011, van der Haert et al 2014, and Kyvik and Olsen 2013) have identified the most important one as availability of funding, and one key function of supervisors is to assist them to identify funding opportunities in the forms of research or teaching assistantships or scholarships or grants.

## A5    Engage in continuing professional development in subjects/disciplines and their pedagogy, incorporating research, scholarship, and the evaluation of professional practices

### Overview
Before becoming principal supervisors, supervisors in category D2 are often required to serve an apprenticeship as a second/associate supervisor, usually for one completion. During this time they are mentored by experienced supervisors in their disciplines and should undertake appropriate professional development. This may take the form of an initial training programme, which should include exposure to research and scholarship in doctoral supervision, as well as provide participants with tools to evaluate and enhance their practice. Once they have completed their apprenticeship and initial training, supervisors need to continue to reflect upon, evaluate and improve their practice.

Supervisors operating at D3 may be expected to be able to reflect upon and evaluate their practice as experienced supervisors, to reflect on and to evaluate their mentoring and co-ordinating. Also supporting, mentoring and managing functions, to be familiar with the scholarly and research literature, and to engage in relevant continuing professional development. Additionally, they may organise and/or contribute to the professional development of less experienced supervisors.

### Typical examples
At D2, reviews of what was learned and what changed through:

- acting as a second/associate supervisor;
- the initial professional development programme;
- engagement with the scholarly and research literature;
- subsequent reflection on and evaluation of practice.

At D3, reviews of what was learned and what changed through:

- the experience of supervision;
- undertaking roles in leading, managing, and co-ordinating supervision;
- engagement with the scholarly and research literature on these functions;
- organising and contributing to the development of their less experienced colleagues;
- 'top up' professional development.

### Supporting literature
For supervisors at D2, there are numerous scholarly sources which can be used to benchmark and enhance their practice, including Delamont et al (2004), Taylor and Beasley (2005), Parry (2007), Eley and Murray (2009), Lee (2012), and Wisker (2012).

For those at D3, sources to prompt reflection and evaluation include Taylor (2002) and Boud et al (2014a and b).

# 4. How should I show my understanding of the appropriate Core Knowledge?

## K1    The subject material

Overview
A key requirement of D2 supervisors is to ensure that there is a good match between the student's research project and their own interests and expertise. In many cases, this will be achieved because the project has been pre-defined by the principal supervisor and the student recruited to undertake it, but in others students will have greater scope to define it themselves. In such cases, supervisors may need to support them to choose a topic which has the potential to make an original contribution to knowledge and understanding in the discipline or disciplines. Once students have chosen a topic, they then have to do the research, which can be beset by problems. Here, as the subject experts, the advice of supervisors as experts can be invaluable. Of course, most supervisors are only experts in their own discipline, which can lead to issues where students are engaged in interdisciplinary research. In such cases, it is important that supervisors respect the perspectives of other disciplines and support students in their endeavours to create new understandings from traditionally different disciplines.

At D3, supervisors may have responsibilities for matching students and supervisors and would be expected to mentor and support less experienced colleagues in subject-related matters.

Typical examples
At D2 evidence of:

- matching the student's research project and the research expertise and interests of the supervisory team;
- where appropriate, supporting students in selecting appropriate topics;
- supporting students in overcoming academic problems with the research;
- supporting students engaged in interdisciplinary research.

At D3 evidence of

- mentoring or supporting less experienced supervisors or examiners in undertaking the above.

Supporting literature
One of the key findings of the literature is that students are more likely to have a high quality learning experience and to complete on time where there is a good match between their research projects and the expertise and interests of their supervisory teams (see Bair and Haworth 2004), Jacobsson 2010, Wadesango and Machingambi, 2011, McAlpine et al 2012) and it is important that prospective supervisors carefully weigh this before agreeing to take on students.

While there can be no guarantees that research topics will necessarily make an original contribution to knowledge and understanding, supervisors may need to support students to assess the risks entailed in different topics and to make choices accordingly (see for example Boehe 2014, Kyvik and Olsen 2013, Van de Schoot et al 2013).

Students starting research often assume that the process will be one of a smooth journey from initial ideas through to conclusions, and it can come as a shock when they come across problems, for example in grappling with theoretical issues or with coping with experiments which yield contrary results. As specialists, supervisors should be accustomed to the 'messiness' of research and be able to support students to overcome problems (see Geraniou 2010, McAlpine et al 2012, Kiley 2015).

Evidence suggests that many supervisors have little personal experience or understanding of interdisciplinary research which can seriously disadvantage students (see for example Gardner et al 2012, 2014, Holley 2015). Lyall et al (2008) suggest that supervisors need to develop strong team working skills, sort out issues such as methodologies, formats and outcomes at the start and regularly review these over the course of the project.

## K2    Appropriate methods for teaching, learning and assessing in the subject area and at the level of the academic programme

Overview
There are distinctive frameworks both within and between disciplines for doctoral research with, at one extreme, the so-called 'positional' framework where the student is part of a much larger specialist research group and subject to detailed direction and, at the other, the 'personal' one where the student is left much more to his or her own devices. Supervisors at D2 need to be aware of the relevant framework within their discipline and of the associated pedagogical approach to supervision. They may also need to be aware that methods of supervision may vary at the level of the academic programme, depending upon whether it is a PhD, a professional, practice- or industrial project-based doctorate and be able to adapt their supervision accordingly.

Supervisors at D3 would be expected to mentor and support their less experienced colleagues in the above.

Typical examples
At D2, evidence of awareness of:

- the disciplinary framework and of associated pedagogic approaches to supervision;
- the different methods of supervision associated with different kinds of doctoral programmes and ability to adapt their supervision accordingly.

At D3 evidence of:

- mentoring or supporting less experienced supervisors or examiners in undertaking the above.

Supporting literature
The classic account of the different frameworks for supervisory practice between disciplines is Delamont et al (2000) while that of variations in disciplinary pedagogies is Parry (2007).

There are numerous useful sources on the differences in methods of supervision between traditional and other kinds of doctorates including Neumann (2005) and Carr et al (2010), on professional doctorates, Draper and Harrison (2011) and Allpress et al (2012), on practice-based ones, and Malfoy (2011) and Cuthbert and Molla (2014) on ones involving industrial or commercial projects.

## K3    How students learn, both generally and within their subject/disciplinary area(s)

Overview
Supervisors at D2 would be expected to have an understanding of ways in which doctoral students generally learn to make the transition to becoming independent researchers and of the implications for their practice. Similarly, there would be an expectation of an understanding of the ways students learn within the discipline. In the case of students undertaking interdisciplinary research, supervisors may need to be aware of how students learn in disciplines other than their own and be able to adapt and support them in their studies.

Supervisors at D3 would be expected to mentor and support their less experienced colleagues in the above.

Typical examples
At D2 evidence of awareness of:

- how students generally learn to become independent researchers and how this influences practice;
- how students in the discipline learn to become independent researchers and how this influences practice;
- where appropriate, how students from other disciplines learn and how to adapt and support them in their studies.

At D3 evidence of:

- mentoring or supporting less experienced supervisors or examiners in undertaking the above.

Supporting literature
As Lovitts (2001, 2005, 2008) has shown, students generally may learn to become independent researchers in many different ways and it is important that supervisors recognise these differences and are able to offer appropriate support, particularly by encouraging them to integrate fully within the cultures of their research environments (see for example Golde 2005, Gardner 2008b, Holloway and Alexandre 2012).

Students learn to make the transition in different ways in different disciplines, usually with greater intervention from their supervisors in the natural sciences than in the social sciences or arts and humanities (Delamont et al 2000, Lovitts 2007, Parry 2009, Ehrenberg et al 2010). But this is by no means an absolute distinction: for example in the sciences, mathematicians may be left very much to their own devices (see Herzig 2004, Geraniou 2010) while there has been experimentation with more interventionist supervision in education and the social sciences (see for example Jones 2009, Hakkarainen et al 2016).

## K4    The use and value of appropriate learning technologies

Overview
Learning technologies are transforming how research is undertaken, and supervisors need to be able to support their students in acquiring relevant skills. Similarly, technology is transforming communication and supervisors need to be able to use the relevant channels effectively to maintain contact with students. The latter may also need to be encouraged by their supervisors to use these media to establish contact with other researchers and to build their profiles in the research community.

Supervisors operating at D3 may be expected to mentor and support less experienced supervisors in the use and value of appropriate learning technologies, and they may also be responsible for ensuring that appropriate resources are available to them and their students.

Typical examples
At D2 evidence of:

- supporting students to acquire the relevant technological skills to undertake their research projects, including information searching, retrieval, storage, and sharing;
- understanding the role of appropriate technologies, including social media, in maintaining contact with students, and using these effectively;
- encouraging students to use relevant media to contact other researchers and build their profile in the research community.

At D3 evidence of:

- mentoring and supporting less experienced supervisors in undertaking the above;
- being responsible for ensuring that the relevant resources are available to supervisors and students.

Supporting literature
A study sponsored by the UK higher education funding bodies and research councils and the British Library (Research Information Network 2011) and a recent study by Dowling and Wilson (2015), found that many supervisors have less understanding of the use and value of learning technologies than their students and suggests that acquiring the relevant knowledge and skills would benefit both their own research and their abilities to advise students. Guidance on information searching, retrieval, and storage can be found in Corti et al (2004) while Minocha and Pretre (2012) have produced a comprehensive handbook of social media for researchers and supervisors.

## K5     Methods for evaluating the effectiveness of teaching

Overview
As with other forms of teaching, supervision can be evaluated by students, peers and by supervisors themselves. Supervisors at D2 need to engage with these methods for evaluation and respond effectively to feedback.

Supervisors at D3 would be expected to mentor and support less experienced colleagues in methods for evaluating their supervision and possibly also play more formal roles in institutional, faculty, school or departmental evaluation processes.

Typical examples
At D2 evidence of:

- awareness of the range of methods for evaluating supervision;
- using an appropriate mix of methods for evaluating supervision;
- demonstrating effective responses to feedback.

At D3 evidence of:

- mentoring and supporting less experienced colleagues to evaluate their supervision;
- undertaking formal roles in evaluation processes, e.g. as members of staff student liaison committees, Directors of Studies managing the administration of internal and external student questionnaires and reporting on the results, or members of review bodies reviewing the comments of examiners relating to the student experience.

Supporting literature
Self-evaluation can be undertaken in the same way as for taught programmes, e.g. after each supervision spending a few minutes completing a simple pro-forma with 'what went well?', 'what went less well?' and 'what will I do differently next time?' (see Hill 2011).

Student evaluation can include devoting (say) one meeting a year to a general discussion of how the student feels about the quality of supervision and/or administering a questionnaire such as that developed by Lee and McKenzie (2011) and discussing the results and/or the administration of an exit questionnaire to departing doctoral graduates (see Taylor and Beasley 2005).

Peer observation is a familiar part of evaluation in taught programmes, and it is equally applicable in doctoral ones (see Goode 2010).

Systematic evaluation over time at departmental level can, as Sampson et al (2015) have shown, be a powerful driver for academic development and continuous improvement of the student learning experience.

## K6　The implications of quality assurance and quality enhancement for academic and professional practice with a particular focus on teaching

Overview
In many countries, doctoral supervision is now regulated by external bodies, including governments, and by institutions themselves. Supervisors at D2 need to be aware of policies and procedures governing supervision and be able to implement them. They also need to be aware of mechanisms for quality enhancement.

Supervisors at D3 may be expected to mentor and support less experienced colleagues in the above. Additionally, they may also have responsibilities at institutional, faculty, school or departmental levels for co-ordinating, supporting, or managing policies and procedures for quality assurance and enhancement in relation to doctoral supervision.

Typical examples of practice
At D2 evidence of awareness of policies and procedures for quality assurance and enhancement relating to doctoral supervision including:

- eligibility requirements for acting as principal or secondary/associate supervisors;
- supervisory loads and numbers of students;
- monitoring student progress;
- examination policies and procedures;
- mechanisms for quality enhancement, e.g. departmental annual reviews, supervisor forums, excellence in supervision awards.

At D3 evidence of:

- mentoring or supporting less experienced supervisors in undertaking the above;
- co-ordinating, supporting and managing policies and procedures for quality assurance and enhancement such as:
- approving recommendations for the appointment of supervisors;
- monitoring supervisory loads and numbers of students;
- monitoring continuity of supervision and, if appropriate, appointing new or additional supervisors;
- monitoring student progress across cohorts;
- reviewing cases of termination and making recommendations;
- reviewing and responding to the reports of examiners;
- reviewing complaints and appeals;
- leading or participating in internal and external reviews of doctoral programmes and responding to findings;
- organising and/or delivering events designed to enhance the quality of doctoral supervision.

Supporting literature
Historically, doctoral supervision has been characterised by Park (2008) as a 'secret garden' within which supervisors and students engaged privately in isolation from the outside world. However, over the past two decades or so, it has been subject to increasing intervention and in many countries it is now one of the most heavily regulated areas of academic practice.

A useful source on quality assurance for supervisors in the UK at both D2 and D3 is Eley and Murray (2009) which unpacks good practice in terms of the precepts of the Quality Assurance Agency's (QAA) Code of

Practice for Postgraduate Research Programmes. While the version of the Code used in the account has been superseded by a later version (QAA 2011), many of the precepts are similar and much of the analysis is transferable. For Europe, there are useful country overviews in Bitusikova et al (2010) and Byrne et al (2013). For Australia, sources include Hammond et al (2010) and Kiley (2011a).

Useful sources on methods for enhancing the quality of supervision include Brew and Pesata (2009), Nulty et al (2009), Brew et al (2011), Hill (2011), Spiller et al (2013), and Blass et al (2014).

# 5. How should I demonstrate my commitment to the Professional Values?

## V1 Respect individual learners and diverse learning communities

<u>Overview</u>
Doctoral students are, of course, individuals in their own right, and must be respected as such by their supervisors. Additionally, doctoral students come from a wide range of diverse groups and backgrounds in terms of gender, ethnicity, race, nationality, social class, sexuality, disability, and age. As such, they constitute diverse learning communities which supervisors need to respect. At D3, supervisors might be expected to mentor and support their less experienced colleagues in these matters.

<u>Typical examples of practice</u>
At D2 evidence of awareness that:

- every doctoral student is different and must be respected as an individual;
- doctoral students constitute diverse learning communities which need to be respected.

At D3:

- mentoring and supporting less experienced colleagues in respecting individual learners and diverse learning communities.

<u>Supporting literature</u>
Doctoral supervision can be viewed as an asymmetrical relationship with the supervisor(s) having much greater authority and power than their students (see for example Bartlett and Mercer 2000, Grant 2008). With such an imbalance, there is a potential for abuse by treating students differently on grounds of their status, personality, backgrounds or their membership of particular social, economic and cultural groups.

One common example of abuse of status is where supervisors insist that their names are automatically included in their students' publications even if they have made little or no contribution to the research. Supervisors should avoid such 'gift authorship' and give credit where it is due (see McFarlane 2015).

There is evidence that some supervisors may behave differently towards students on the basis of their personalities and/or social group memberships (see for example Gardner 2009a, Ostrove et al 2011, Gunnarsson et al 2013, and Winchester-Seeto et al 2014). Such behaviours are discriminatory, which is of course immoral and in many countries illegal. It is important for supervisors to be aware of the issues and to accord students equal respect.

## V2 Promote participation in higher education and equality of opportunity for learners

<u>Overview</u>
Supervisors may be involved in the recruitment and selection of doctoral students, in which case they need to bear in mind the need to reach out to applicants from all sections of the population and the need for selection to be fair and based on merit.

Once students have been admitted, supervisors need to be aware of the issues which may be associated with diversity among the student population, domestic and international, and to develop strategies for supporting all students to successfully complete their studies.

Similarly supervisors need to be aware of the issues which can be associated with variations in modes of study, including part-time and distance, and again to have developed strategies to support students to successfully complete their studies.

At D3, supervisors would be expected to be engaged in mentoring and supporting less experienced colleagues in the above, and additionally they may be involved in co-ordinating, leading, managing or supporting the recruitment and selection of doctoral students.

Typical examples
At D2 evidence of:

- reaching out to try and recruit doctoral students from all sections of the population;
- ensuring fair selection;
- an awareness of issues stemming from:
    - the social and economic diversity of the doctoral student population;
    - the international diversity of the doctoral student population;
    - part-time and distance modes of doctoral study;
- the development of strategies for supporting all students to successfully complete their studies.

D3

- mentoring less experienced supervisors in relation to undertaking the above;
- co-ordinating, supporting, or managing initiatives to recruit and select doctoral students.

Supporting literature
Historically, doctoral students have tended to come from a narrow range of backgrounds (see for example Gardner 2009b, Archbold 2011, Offerman 2011, and Petersen 2014). While there has been recent progress in diversifying the student body, there is still some way to go (see Wakeling 2005 and 2008, Wakeling and Kyriacou 2010, McCulloch and Thomas 2012) and this needs to be reflected in ensuring that recruitment extends across the eligible population and that selection is fair, whether this be by individual supervisors (D2) or those with institutional or departmental responsibilities (D3).

Supervisors need to be aware that students from non-traditional backgrounds may initially lack confidence as researchers (see Johnson et al 2000) and offer them encouragement and support (see Taylor and Beasley 2005). Similarly, supervisors need to be aware of the issues stemming from the international diversity of the student population and to develop strategies for supporting them (see for example Ryan 2005, Manthunga 2014, and Hutchinson et al 2014).

Again historically, the vast majority of students studied full-time and on campus, but their modern counterparts are much more likely to be studying part-time when in employment (see McCulloch and Stokes 2008) and/or at a distance from the institution (see Erichsen et al 2012). Part-time and/or distance studies can pose challenges for supervision and supervisors need strategies to overcome them (see Watts, 2008, Nasin and Mafakheri, 2015).

## V3    Use evidence-informed approaches and the outcomes from research, scholarship and continuing professional development

### Overview
Supervisors at D2 should be familiar with appropriate sources and be able to demonstrate influence upon their practice. Similarly, they should be able to show that they have undertaken continuing professional development and demonstrate the impact upon their practice.

At D3, supervisors may be expected to mentor and support less experienced colleagues in the above. But they would also be expected to be engaged themselves in similar activities relating to their roles in co-ordinating, supporting, managing and/or mentoring doctoral supervision.

### Typical examples
At D2 evidence of:

- familiarity with the relevant scholarly and research literature on doctoral supervision and evidence of its influence upon practice;
- engagement in appropriate continuing professional development (for example participating in initial training programmes, keeping supervision logs, attending supervisor forums, training as examiners) and its influence upon practice.

At D3 evidence of:

- mentoring and supporting less experienced colleagues in undertaking the above;
- familiarity with the relevant scholarly and research literature on co-ordinating, supporting, mentoring, and managing doctoral supervision, and evidence of its influence upon practice;
- engagement in appropriate continuing professional development (for example top up training, modules on leading doctoral supervision) and its influence on practice.

### Supporting literature
As the bibliography to this guide hopefully demonstrates, there is a substantial scholarly and research literature which doctoral supervisors can use to benchmark and enhance their practice.

In contrast to a few years ago when doctoral supervision had to be learned 'on the job' (see McAlpine and Amudsen 2009), most institutions and many faculties, departments and schools now make provision for the professional development of supervisors (see for example Hammond 2010, Kiley 2011b, Thune et al 2012). Engagement in developmental activities would be an important source of evidence for this descriptor, whether as participants and/or as contributors.

## V4    Acknowledge the wider context in which higher education operates, recognising the implications for professional practice

### Overview
Over the past three decades or so, there have been numerous changes in the wider context of the doctoral education which have had implications for supervision. Many of these, including the diversification of the student population, the growth of regulation, and pressures for completion, have informed other sections of this guide and need not be repeated here. But one important change which has not been so far considered is in relation to the employability of doctoral graduates.

Historically students undertook doctorates in the expectation of becoming academics, and one of the functions of supervisors has been to help them to prepare for this career. But, in recent years, doctoral graduates have been going into a much wider range of careers and have needed to have or acquire the so-called transferable skills to find jobs in both the public and private sectors. While supervisors at D2 have not normally been directly involved in developing such skills, they have acquired indirect roles in supporting students to analyse their training needs and meet them.

Supervisors at D3 might be expected to mentor and support their less experienced colleagues in these matters.

<u>Typical Examples</u>
At D2 evidence of:

- awareness of the need for doctoral students to develop the knowledge and skills to prepare them for careers inside and outside academia;
- supporting students to prepare for employment, for example by conducting training needs analyses to identify gaps in their portfolio of skills and encouraging them to take advantage of relevant development opportunities.

At D3 evidence of:

- mentoring and supporting less experienced supervisors in undertaking the above.

<u>Supporting literature</u>
Overviews of the many changes in doctoral education over the past three decades or so and their implications for supervision can be found, for example, in Taylor (2012 and 2014).

With regard to the specific case of employability, the doctorate was originally undertaken as preparation for an academic career, and clearly supervisors are uniquely placed to support their students to prepare for such a role. But research (see Austin 2011, Brew et al 2011, and McAlpine 2013) suggests that many supervisors simply assume that students will acquire the relevant attributes by a process of osmosis and fail to give them explicit guidance or support. Supervisors then need to consciously engage with students contemplating academic careers and offer guidance and support, for example in relation to networking, giving presentations, writing for a range of audiences, publishing their work, marketing themselves, and crucially learning how to teach and support student learning (see Jephson et al 2012, Greer et al forthcoming).

However, in recent years a complex set of supply-side and demand-side factors have meant that, in many countries, only a minority of doctoral graduates have gone on to become academics while the majority have found employment elsewhere in the public and private sectors (see for example Pederson 2014, European Science Foundation 2015).

This de-coupling of the doctorate from academic careers has led to pressures from research sponsors, employers and students for the provision to be made in doctoral programmes for the latter to acquire the relevant knowledge and skills for wider employment (see Neumann and Tan 2011, Byrne et al 2013, Diamond et al 2014, Hancock and Walsh 2016).

For these reasons, in addition to directly supporting their students to prepare for academic careers, supervisors may now have wider roles in supporting them to develop transferable skills to equip them for employment elsewhere in the public or private sectors (Taylor and Beasley 2005, Reeves 2007, McAlpine and Emmioglu 2015).

## Conclusion

The UKPSF enables academic staff engaged in teaching and supporting learning to develop their practice and to gain professional recognition. Hopefully, this Guide has shown that, as well as applying to teaching on taught programmes, the framework can be applied to teaching and supporting learning in the form of supervision on doctoral programmes. As such, it offers a powerful tool for the development of supervisory practice and an important source for structuring evidence in applications for Fellowship of the HEA.

# Notes

All the experience and evidence included in an application for Fellowship must relate to HE provision, for further details see The Frameworks for Higher Education Qualifications of UK Degree-Awarding Bodies.

For international qualifications see:
- first cycle or above of the Qualifications Framework in the European Higher Education Area (QF-EHEA);
- level 6 or above of the Australian Qualifications Framework;
- level 5 or above of the New Zealand Qualification Framework;
- other equivalent higher education frameworks;
- delivery of non-credit-bearing continuing professional development for academic and learning support staff in higher education may also be considered as evidence equivalent to the higher education academic frameworks.

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