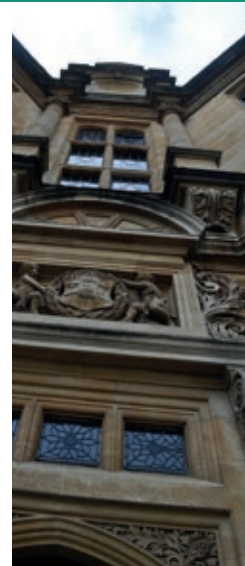




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**A comparative  
study of doctoral  
assessment:**  
the United States,  
Germany,  
the Netherlands  
and Macau  
May 2016

**Gillian Clarke, with Carolyn Wynne**



Quality and Reputation  
of the UK Doctorate

Sponsored by



QAA

**A comparative study of  
doctoral assessment:**  
the United States, Germany,  
the Netherlands and Macau  
May 2016

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**With contributions from:**

Dr Debra Stewart, *President Emerita and Senior Scholar,  
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Professor Maggie Fu, *Acting Dean, Graduate School,  
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# INTRODUCTION

International higher education is a rapidly changing environment and is affecting many aspects of doctoral education, especially training structures (UKCGE, 2015) and thesis models (Jump, 2015, Council of Graduate Schools, 2016). Given the role played by assessment in assuring quality and the current good reputation of UK doctorates (Clarke and Lunt, 2014), it was timely for the Council to focus on making some cross-country comparisons of doctoral assessment as a first step in documenting consistent and divergent practice, in parallel evaluating the strengths and challenges of current assessment processes, in the UK and internationally.

In 2015, UKCGE's Quality and Reputation of the UK Doctorate Working Group's sub-group on Doctoral Assessment therefore undertook three case studies linked to the biennial International Conference on Developments in Doctoral Education and Training (ICDDDET), in 2015 held in Oxford. The group developed some general questions (see Annex) to inform semi-structured interviews with three colleagues who were able to provide an overview of the summative examination of the doctorate in their respective countries. Another colleague who attended the Oxford conference later provided a written response to the interview questions. The Council intends to build on these preliminary case studies by gathering more evidence about doctoral assessment practices in countries other than the UK, if possible exploring further the themes generated in this small-scale project, the aim of which is a publication available to UKCGE members. This brief report is intended as an interim publication that raises some themes and questions.

## CASE STUDIES

Semi-structured interviews were conducted in three of the case studies which enabled us to pursue similar lines of questioning with each respondent, while allowing further exploration of points of particular interest in each country.

# 1 THE UNITED STATES

Respondent:

**Dr Debra Stewart**

*President Emerita and Senior Scholar,  
US Council of Graduate Schools:*

[www.cgsnet.org](http://www.cgsnet.org)

## Appointment of an advisor or/and advisory committee

In the US, there is considerable variation across institutions, and sometimes within institutions across fields, in how advisors and advisory committees function. Our respondent described what she saw as the typical situation. The doctoral assessment process normally begins with the appointment of an advisor and/or an advisory committee, chaired by the student's advisor. This may happen immediately upon enrolment in the programme, or a temporary advisor may be appointed for a period of time while the students get to know the faculty and focus in on an area of research. For example in the biological sciences, students often rotate through different labs and work with temporary advisers until they decide on the precise focus of their research interest and then, with mutual agreement, select an advisor or advisory committee based upon that interest. When the advisor or the advisory committee is formally appointed the advisor is responsible for helping the student develop his or her academic programme and research focus. The student is typically free to request a change in an advisor or advisory committee members if his or her research shifts. Ideally there is regular informal interaction between students and their advisors. However the advisor or advisory committee meets formally with the student annually to assess progress toward degree, or more frequently as the situation merits. In institutions where only an advisor is appointed, typically a committee is established for purposes of qualifying exams and

then later to provide a broader range of advice through the dissertation. In some fields and institutions the single advisor model prevails throughout.

The rationale for an advisory committee as opposed to a single individual advisor is that the committee offers 'a rich mixture of advice' available from 'different areas of expertise'. But even with the committee system, the chair of the advisory committee wields the greatest influence, and is most accountable for directing the student and assessing student progress.

### **Comprehensive examinations (Preliminary examinations and qualifying examinations)**

After a period of coursework, the length of which varies according to several factors, including discipline and institution, the student sits field-based exams. At this point, students are expected to be competent in the wider field as well as knowledgeable about their field of specialization. Comprehensive examinations, generally called preliminary examinations or prelims, consist of a written submission, sometimes followed by an oral exam. The examining committee may be the student's advisory committee or may be composed of a selection of other faculty from the department or field. In some institutions and some programs the oral part of the comprehensive

exam is a defense of the thesis proposal. When this is the case, upon successful completion of both the written comprehensive and the oral defense, the student is admitted to candidacy. In other institutions and programs there is another step typically called qualifying exams. In the qualifying exam system the student may be examined more deeply in advanced aspects of his or her field of specialization as well as examined on the dissertation proposal, including the research design aspects. Successful completion of the qualifying exams moves the student to candidacy. Candidacy in the US context means the student is now prepared to engage fully in researching and writing the dissertation.

### **Dissertation submission**

Following the comprehensive examinations (prelims and/or qualifying exams), students work with their advisers until the dissertation is ready to submit. Where the student has had the benefit of a full advisory committee, practice varies among institutions and fields as to how much the advisory committee members, beyond the chair, provide feedback on the dissertation before submission. Again, there are differences across disciplines; as is always the norm in lab-based subjects, doctoral students in STEM disciplines are surrounded by a team of senior faculty, junior faculty, post-docs and other doctoral students so

they typically access informal advice and feedback day to day. In arts, humanities and social sciences, the student takes the initiative to involve other faculty members in addition to the adviser. In general the work environment is more solitary. But many programmes develop journal clubs and a variety of discussion opportunities for peer and community feedback to occur.

Generally the student and the advisor and / or advisory committee jointly decide when the dissertation is ready to submit. At this point, in some institutions and fields, external reader reports are requested and the scheduling of the exam awaits the return of those reports. After the dissertation is judged ready to submit, the next step is to schedule the dissertation defense and, again depending upon institutional practice, it can be at the request of the advisor/committee or at the request of the student. Before the defense, candidates should have had multiple opportunities to present their research, both on their own campus and at conferences.

## **Dissertation defence**

The assessment panel typically comprises the principal advisor and the advisory committee; often a person external to the committee is appointed who has not been involved in advising the student previously and whose

role is simply to ensure that the process is conducted in a way that is appropriate. Sometimes this “neutral” person is called a graduate school representative; sometimes the person actually chairs the committee. A few universities also appoint examiners from outside the university for doctoral awards. If at any point during the defense discussion there is an indication that a member of the committee is trying to harass the student, the graduate school representative is authorized to step in and manage the situation, helping to protect the student's interests. The role is to ensure the assessment process is procedurally fair and to mediate in difficult situations.

Typically students are asked to give a presentation of their research at the beginning of the defence (a practice also common in some other countries/disciplines, and see other case studies), followed by questions from the committee and even the general audience. In some institutions part of the examination is routinely closed to all but the committee members to ensure that the student will be examined with sufficient rigour. The candidate is not informed at the start of the defence whether s/he has passed or failed. Even though the advisor may have agreed that the student is ready to submit and is therefore fairly confident of the outcome, students are encouraged to take the

defence as a serious professional experience. Successful defences are often followed by joyous celebrations, sometimes including family members and colleagues in the programme. Usually the process is managed so the student defends well. Increasingly, part of the defence requires the student to describe the next steps – what is the student's strategy and where is the research going to be published? In theory, 'anyone' can attend the defence but in practice few defences have large audiences.

## **Different doctoral programmes**

In the US the professional doctorate is designed to prepare individuals for leadership roles in the world of practice, while the PhD is designed to prepare scholars who will develop new knowledge in a field. Our respondent suggested that, in the UK, '*you have a very bright line between the professional doctorate and the PhD*'. In contrast she noted that while in the US there is a bright line in some fields, the line is much less bright in others. There may be both professional doctorates and PhDs in the same field, which can look very similar. She elaborated by noting that some professional doctorates such as the JD (law) and the MD (medicine) have always been housed within their own colleges or schools and are assessed by external regulatory bodies

within the profession. These degrees are clearly practice degrees and are unlike PhDs. In other newer fields, such as the Doctorate of Pharmacy and the Doctorate of Audiology you can find a variety of practices across US universities. Audiology is a 4-year doctorate, where the first two years comprise coursework, the third year is a combination of coursework and investigating an applied research problem generated by the professional context, and the final year consists of a clinical internship. Practice doctorates in pharmacology follow a similar structure. Sometimes these degrees are located in the graduate school; sometimes they are located in professional school units. Wherever they are located, they are purely practice degrees. However in a field like education there is a broad spectrum of models, some more research- and others more practice-oriented. While it is fair to assume that the EdD in education is more practice related and less research intensive than the PhD in Education, it is possible that an education EdD in one university could look very much like an education PhD in another institution. And some of this difference is accounted for by where the degree is housed. Practice doctorates that are regulated and managed by graduate schools are more likely to have parity with PhD regulations, including assessment requirements. Our respondent emphasized the value of including all forms of doctorate in graduate school

jurisdiction to encourage consistent practice, especially for examination, and that there are similar advantages when masters degrees are also included, giving the opportunity for quality control. However she acknowledged that this was not the only way quality could be achieved and that other more decentralized approaches could work as well.

### **Threshold judgement**

*At doctoral defence stage 'we're way past grading', according to our respondent; 'these people are professionals [and]...by the time they get to this stage the question is, do we welcome them into the profession or not? That's what the question is, not are they an A-list-er or a B list-er?' Our respondent added: 'I'd have to know more about what [other countries] get out of [grading] and what the motivations are of the candidates in pursuing a doctorate but [grading] is not how I think about this stage of intellectual and professional development'.*

### **Summary**

This interesting study from the US highlights several differences and similarities when compared with UK practice. As in the Australian system, national 'categories' of doctorate exist: 'research' and 'practice'. The appointment of an advisor or a full advisory committee within a year after registration provides support and advice for the candidate, similar to that expected of the supervisory team in the UK. However, a significant difference is that this advisory committee becomes the assessment panel at the point of summative assessment in most cases, with the student's main supervisor (advisor) contributing to the final judgment, a practice not permitted in the UK. As in the UK, the student takes responsibility for the dissertation being ready for submission, normally with the approval of the adviser, and does not know the outcome of the defence in advance. The similarities and differences among doctoral degrees in the US are of particular interest; the influence of the 'graduate school' at institutional level suggests similarities with UK practice, whether graduate school, doctoral college or other similar organizational unit. And, as is currently the case in the UK, doctoral degrees are awarded on the basis of a threshold, rather than graded, judgement.



## 2 GERMANY

Respondent:

**Professor Dr Stefan Hornbostel**  
*Director, Institute for Research  
Information and Quality Assurance  
(iFQ), Berlin*

[www.research-information.de/  
Institut/inst\\_about.html](http://www.research-information.de/Institut/inst_about.html)

In Germany a variety of PhD models exist mainly distinguished by the degree of compulsory training, access to resources at the degree awarding institution, and the workload of non-thesis related activities. In the traditional model a prospective candidate identifies an individual, usually a professor, or a research group, working in their chosen area, discusses the thesis project with them and receives a formal or informal consent to be supervised thereafter. With the introduction of structured doctoral programmes the decision made by an individual supervisor is becoming less common and shifts in some places towards a committee decision. Doctoral candidates may work in different contexts on their thesis. They may be research assistants at a university or research institute where they have to teach or work on research projects but are usually in close contact with their supervisor. Various foundations provide three year scholarships for doctoral candidates which are supposed to cover the living expenses. Scholarship holders have no obligations for paid work during the funding period and in fact there are even regulations banning paid work. Individuals applying for an industrial PhD may already be working in the company where they will conduct their research. All types of doctoral candidates may or may not be enrolled in a university's or research institute's graduate school programmes where they can participate in courses, e. g. in research or transferable skills. Some structured doctoral programs focus on a specific research topic and employ a group of doctoral students working on different aspects of that

topic – a model also common to some STEM disciplines in other countries.

## **Different doctoral programmes**

Comparing UK professional doctorates, especially the EngD, with the continental industrial PhD, our respondent suggested *'[Germany has] some supportive schemes where PhDs are carried out within companies'*. As is the case for the UK EngD, the industrial PhD is held in high esteem by employers; candidates spend much of their programme with the company but the whole assessment process is managed by the university where they are registered. Discussing the status of professional doctorates and PhDs in academia, our respondent suggested that *'We have the problem, but not the title'* – in other words professional doctorates are offered in Germany but they are not known by that title. For the last five years, the German Research Foundation (DFG) has given grants for industrial PhDs in co-operation with industry *'but'*, our respondent contended *'this is not to stand up for it'*. That Germany has *'a problem'* has recently become clear, according to our respondent: a debate is currently taking place regarding the universities of applied sciences. Currently these institutions are not permitted to award doctoral degrees; this status is

under discussion, with some states looking to change regulations so that the applied sciences universities may in future confer doctorates. In our respondent's view *'This is more...the professional side that is looking for a title'*.

## **Dissertation/thesis models**

Dissertation word length varies according to subject, as in the UK. Our respondent cited the fields of mathematics and medicine in particular where short dissertations are most likely: *'Mathematicians often...solve a really complicated problem within 10 or 20 pages'* and where regulations may *'say "No more than 30 pages"'*. In humanities and social sciences, the *'main route'* to a doctorate is *'to write a book'*, whereas in natural and life sciences, *'the culture of writing...between three and five articles in journals is, I would say, today the standard model'*. In some cases the collection of articles is all that is required, but in others, papers are supported by a foreword and concluding commentary *'to show...[the] line of intellectual interest running through the different articles'*.

## **Pre-submission**

Usually professors comment on a PhD candidate's written work before the dissertation is submitted,

providing feedback that gives the candidate an idea of how much work is needed before submission and before the dissertation goes into the official journal that records PhD awards.

## **Assessment and the doctoral defence**

All doctoral examinations in Germany include a viva voce, or oral component. There are *'no great variations'* in the length of the oral examination according to our respondent, which *'usually'* lasts *'one hour'* but may take as little as 30-45 minutes. In general all doctoral defences are public, unless there are concerns about commercial sensitivity or confidentiality. However, public interest in attending doctoral defences is low, so normally those present would be family, friends and departmental colleagues of the candidate.

### **Disclosure of defence outcome to candidate**

It is common for the candidate to know in advance of the defence the partial outcome of the examination. First, the written submission is reviewed and assessed: the mark at this stage usually contributes the larger part of the assessment. The examiners give the candidate written feedback on the submission in advance of the defence, which means s/he is aware of any criticisms

and questions they may have. As well as this information, the candidate is given a mark for the dissertation in advance of the oral defence, during which the dissertation is *'reviewed'*. The examination *'usually starts with a short introduction by the...candidate'*. The assessment panel is made up of two to three professors, one post-doc and one other doctoral candidate. At the end of the oral defence, the candidate receives the second mark which, added to the dissertation mark, provides a final grading for the degree.

### **Corrections**

Only *'very seldom'* are candidates asked to undertake major corrections once the defence has taken place, partly as a result of the feedback provided to the candidate before submission. However, our respondent suggested that, in arts and humanities, a candidate may be obliged to change parts of a dissertation in order for it to be accepted for publication, although such changes *'have no role in the award of the degree'*.

### **Supervisor as examiner**

As in the US, in Germany the candidate's supervisor is also an examiner. Our respondent commented that this is *'really different to other systems where these roles are strictly separated'*. When asked to comment

on the supervisor's dual role as an examiner, our respondent suggested there were both advantages and clear disadvantages. The latter include a possible lack of objectivity about the candidate and potential for compromising the independent judgement of the second examiner, especially if the supervisor assesses the candidate's work at a higher standard than the other examiner. The main advantage of a supervisor as examiner is that s/he has witnessed the 'complete development' of the student so if, for example, the student performs poorly in the oral defence because they are nervous or finding it difficult to formulate answers, the supervisor can represent the student's interests when grading is being discussed. Also, if for any reason a candidate has had difficulties, for example, if the research did not go smoothly and the results are 'not as good and clear' as might have been expected, the supervisor's role would include informing other examiners of how successfully the candidate tackled the challenges.

## Grading

Germany uses four grades, including *summa cum laude* ('with honours' – the highest grading). The way the system works is that the lower the number, the higher

the grade, with doctoral candidates needing to score less than 1.0 to achieve *summa cum laude*. Those not achieving the highest grade are mainly awarded either *magna cum laude* or *magna*.

The number of graduates achieving the *summa cum laude* grade is growing, leading to some grade inflation. In some universities 'nearly half of all the PhDs are *summa cum laude* and there are others where this percentage is clearly below 10%...'. According to statistics produced by the iFQ, there is no correlation between university type and the trend for growing numbers of *summa cum laude* graduates. Our respondent suggested the problem is caused by discipline cultures crossing local cultures and, in many cases, that a local rather than a disciplinary standard is being applied when the assessment outcome is decided upon.

German speakers can access the iFQ doctoral grading statistics at: <http://www.forschungsinfo.de/promotionsnoten/>

These national statistics include the number of awards at each grade and can be viewed by institution. If the number in a discipline nationally is low, the results for that subject are not published. Similarly to the UK (HESA statistics), institutions or individuals can pay for bespoke

statistical data to be generated. The national statistics show three years' data at a time to avoid skewing caused by low numbers.

## Academic jobs

Our respondent alluded to the incorrect yet common perception in that a *summa cum laude* grade is necessary for an academic job and suggested that this may be part of the reason for grade inflation: some may think

'that you need a *summa cum laude* dissertation to apply later on for a professorship or something. This is not the case, but indeed this is part of the game. My impression is [that] there is strong competition and a lot of universities are saying "We educated these young [people] and we have to make sure they are able to have a career within the academic system", therefore there might be some doubts but we give them *summa cum laude*...'.

## Summary

The grading system in Germany is of particular interest given that the UK, in common with many other countries, currently uses a threshold (pass/fail) system for doctoral assessment. As in the US, supervisors (advisers) also act as examiners and, as our German respondent suggested, this can be a disadvantage to the independence of the process, yet be advantageous to the candidate in some circumstances, depending on a cordial relationship between supervisor and candidate. Another feature of doctoral assessment in Germany that mirrors practice in the US is that the assessment panel provides feedback to the candidate on the quality of the dissertation in advance of the oral defence; in the US this occurs before submission (although our respondent suggested that in some cases this may be 'theoretical') and in Germany the feedback is formal, occurs post-submission, and helps the candidate to focus on questions the examiners are likely to raise at the defence.

# 3 THE NETHERLANDS

Respondent:

**Dr Saskia Ebeling**

*Policy Officer, Faculty of Life Sciences,  
University of Utrecht*

## **Different doctoral programmes**

Having confirmed that so-called professional doctorates are not named in this way in the Netherlands (and nor do they use the term 'industrial PhD'), our respondent referred to '*different types of PhDs*'. In life sciences, for example, candidates funded through different routes may be working side by side on the same project, so an international student sponsored by a national scholarship may have a similar experience to a Netherlands student funded by a pharmaceutical company under the supervision of a university professor and who may be an employee of the company.

## **Thesis submission**

By the time the candidate submits the thesis, the supervisor has composed a '*reading committee*', which subsequently is reformed as the assessment committee (see below). This group is required to approve or reject the manuscript within one month of submission. The outcome is the result of an unconditional, majority vote (yes/no). Feedback to the candidate from the reading committee is '*not allowed*', according to our respondent. The judgement that the thesis is of sufficiently high quality to be submitted therefore rests with the supervisor.

## Defence

Once the reading committee has confirmed that the candidate may progress to the public oral defence, the supervisor submits a form to the rector's office applying for the defence to be scheduled. Typically an assessment committee in any subject would have eight members, not all of whom would be 'well versed' in the candidate's topic, although they would be experts in the wider field. For example, in a life sciences defence, a medical doctor might be one of the examiners and could ask how the techniques emerging from the research could be applied clinically. Examiners are often chosen for their knowledge of a particular chapter topic in the thesis.

The defence normally lasts for '*around 45 minutes*', during which the candidate is questioned by an assessment committee '*mostly*' comprising members of the original reading committee. As in Germany, this committee includes the candidate's supervisor (although in the Netherlands the supervisor '*takes no part*' in the judgement), and usually at least three professors of the candidate's university. Also similarly to the German process, it is the reading committee's

judgement as to whether or not the defence can take place. Our respondent suggested that:

'It seldom happens that the reading committee says "No", so the majority of the work [ensuring the thesis is of an appropriate standard] is being done by the supervisor. It's through his or her judgement and of course, they make a fool of themselves if they let someone submit a manuscript that's no good, so [the supervisor] will make sure it's of a sufficient level. And the defence itself, you don't fail, it doesn't happen.'

Our respondent subsequently confirmed that on entering the defence, the candidate knows they will pass unless something very unexpected occurs.

## Thesis models

Our respondent confirmed that all doctoral theses in the life sciences field '*are based on published manuscripts*', i.e. journal articles (one may be awaiting publication). The thesis comprises two or three articles, together with a general introduction (including a literature review) and, in conclusion, '*the journal discussion*'.

## Assessment criteria and grading

National guidance specifies that the thesis should demonstrate a substantial piece of original research. As in the UK, each university has its own PhD regulations with, in some cases, faculty-specific amendments. For example, there may be differences between fields in the number of publications to be included in the thesis. Details concerning thesis structure and content are approved '*at the discretion of the dean of the relevant faculty*'.

In the Netherlands, as in the UK, a pass/fail judgement applies in the PhD examination. However, a distinction may be awarded to outstanding graduates. Our respondent suggested that because so many factors unknown to the examiners contribute to the thesis, including any contribution by third parties such as the supervisor, it would not be fair to introduce a grading system.

### Summary

The concept of a reading/assessment committee in the Netherlands differs from the other two countries, in that the candidate is not permitted to benefit from the committee's feedback on the thesis before the defence. This is in contrast with the US system, where one of the purposes of the assessment panel is to guide the candidate rather than leaving the supervisor to judge when the thesis is of an adequate standard. And even though the supervisor is a member of the assessment committee, unlike in Germany and the US, s/he is not permitted to contribute to the judgement, only to provide advice to the committee/panel. An interesting element of the Netherlands system is that the assessment committee has the option of awarding a distinction in addition to the pass/fail judgement.

The fourth case study was in the form of a written response, as follows:



# 4 MACAU

Respondent:

**Dr Maggie Fu**

*Acting Dean, Graduate School,  
University of Macau*

## **Different doctoral programmes**

Our respondent confirmed that Macau currently has no experience of professional doctorates but emphasized the importance of international comparability of these programmes, based on a common understanding within the relevant discipline, especially to assure consistent standards. One of the benefits of international comparisons was likely to be increased mobility and job opportunities for graduates. Macau is considering introducing professional doctorates in response to the changing needs of the professions.

## **Preparation of candidates for the oral defence**

Prior to their own defence, candidates may attend oral examinations in their field of expertise and are advised to discuss the defence with colleagues in their academic unit to aid their understanding of the process and procedures involved in the examination. Candidates normally prepare a presentation to introduce their thesis and time is allocated for this as part of the oral defence. On the day of the defence itself, candidates take part in a one-hour rehearsal of the examination, during which they are advised to familiarize themselves with the venue, set up their computer and ensure all electronic devices are functioning normally, distribute any handouts and generally prepare for the examination.

## **Assessment process, including the oral defence**

As regulated by higher education law in Macau, the oral defence is a compulsory feature of the PhD examination. At local level, the University has its own regulations governing procedures for the oral defence.

The oral defence examination committee meets prior to the defence for the purpose of confirming official acceptance of the thesis and to introduce committee members to the full extent of detailed examination procedures. The speaking order and roles of committee members during the defence are also decided at this meeting and any requests for clarification or explanation are addressed. The committee consists of at least five members, including the chair, supervisor, external examiner and two internal examiners. The role of internal examiner can be held by any qualified member of the University's academic staff in the relevant discipline, except the candidate's co-supervisor(s), neither of whom may be appointed as examiners. The external examiner must hold the rank of Associate Professor or above at a non-Macau academic institution.

The defence is normally held within two months of the official acceptance of the thesis and candidates

are given at least one week's notice of the date of the exam. The oral defence is open to the public. The candidate first gives a 30-minute presentation of the thesis before responding to questions from members of the examination committee. The time permitted for the defence may not exceed two hours, including the candidate's presentation. Following the presentation and question and answer session, the examination committee discusses and evaluates the candidate's performance. Through a process of open ballot voting with supporting statements, the committee decides if it is appropriate to proceed to the final resolution deliberation session. A resolution must be decided by majority vote and committee members may not abstain from voting. All outcomes of the oral defence, including the resolution-deliberation discussions must be recorded.

## **Outcomes**

The committee's judgement is based on the quality of the thesis, the candidate's presentation and also his/her performance when answering questions raised by the examiners. The potential outcomes of the examination are pass (P), conditional pass (CP) or fail (NP). If the candidate has passed without revisions (P), they are required to submit a final copy of the thesis

to their academic unit within one week of the defence. Two possible outcomes apply if the candidate is awarded a conditional pass (CP). In the first, subject to minor revisions, the candidate must submit a revised thesis, either to their supervisor(s) only, or to all members of the examination committee, for final assessment. In these cases, the candidate must submit a final copy of the thesis to their academic unit within three months of the date of the oral defence. In the second conditional pass, subject to major revisions, the student is required to re-submit the thesis and re-take the oral defence within one year. If the outcome of the examination is a fail, the student's registration on the PhD programme is terminated.

#### **Disclosure of defence outcome to candidate**

The candidate is not made aware of the examiners' comments until the oral defence examination is over. Not allowing the candidate to have prior warning of examiners' comments on the thesis prevents them from preparing answers in advance to examiners' questions. This is thought to enable examiners to test the candidate's command of the field of study.

Candidates are required to submit bound copies of the corrected thesis as approved by the examination committee after the oral defence. They also submit a soft copy of the thesis to their academic unit for onward transmission to the university library, the thesis being formatted according to library requirements. All PhD theses are also required to be published online, with ProQuest UMI Dissertation Publishing.

#### **Summary**

The assessment process in Macau is rigorously regulated and managed, particularly the oral defence.

As in the UK, supervisors may not act as examiners in the final assessment. As in the US and the Netherlands, a panel or committee is involved in the examination, although in Macau the committee's role does not include advising the candidate on the thesis as they do in the US and the Netherlands. At present, professional doctorates are not offered or recognized in Macau, although it is possible some may be introduced in response to the needs of the professions. An interesting feature of examination outcomes in Macau is that if the candidate is given major corrections to the thesis, this automatically triggers a second oral defence. By contrast, most candidates required to undertake major revisions in the UK would be required to re-submit their thesis, or parts of it, to one or both examiners but would not normally have to participate in another viva following the re-submission.

# DISCUSSION

The case studies from the US, Germany, the Netherlands and Macau, similarly to the UK, suggest the influence of subject expectations for PhD assessment, in parallel with the application of national and local guidance and regulations designed to achieve consistent practice and assure quality.

The oral defence or viva voce examination is common to all four countries and there was no suggestion from our respondents that they were reviewing its purpose. The situation is similar in the UK, with all doctoral candidates required to undertake an oral examination whereas in some other countries, for example Australia, the viva is not routine (and see Lovat et al, 2015). The oral examination in the four countries in this study, however, differs from the UK format: in each case the

oral defence is public and, whereas in the UK the actors in the assessment are a relatively small group, in each of the other countries a larger committee participates in the assessment.

Another interesting comparison concerning the assessment process is that in the US and Germany, the candidate's advisor or supervisor is appointed as an examiner, a practice not permitted in the UK or in Macau. In the Netherlands the supervisor routinely attends the defence but does not contribute to the judgement, while in the UK it is often but not always the case that the supervisor may attend with the candidate's permission (and may not contribute). In the US, it is not routine to appoint an external examiner; but in the other three countries and in the UK, at least one external examiner is normally appointed and may have an influential voice when the final judgement is determined.

The grading system in Germany provides an interesting model that suggests the possibility of differentiating achievement above the threshold (considered useful by some), but also the unwelcome potential for grade inflation and inconsistency. Unlike the USA and the UK, Germany, the Netherlands and Macau do not formally acknowledge the concept of the professional doctorate,

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although Germany does recognize different forms of PhD and Macau is considering introducing a limited number of professional doctorates.

As in the UK, each country's practices appear to have developed over time as a result of various influences and local circumstances and display strengths and challenges. The four systems offer food for thought in the UK, raising possibilities for reviewing our national and local doctoral assessment practices, including: the size and composition of the examining body; the role of the supervisor/advisor in the assessment process; disciplinary norms and expectations, in particular concerning thesis structures, and the practice of grading doctoral degrees.

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# ANNEX

## Questions asked of respondents in semi-structured interviews

1 We began with a general question to our respondents, asking them to summarise doctoral assessment procedures in their country.

In describing their procedures we requested that they comment specifically on:

- 1.1 Similarities or differences between the assessment of different types of doctoral degrees
- 1.2 Whether the assessment is threshold or graded and the implications of these models

2 Secondly, we asked respondents to comment on some of the detailed aspects of doctoral assessment, including:

- 2.1 The extent to which national norms influence institutional protocols
- 2.2 Opportunities for the candidate to prepare for the examination
- 2.3 When the candidate is made aware of the outcome of the assessment
- 2.4 The number of actors involved in the assessment and their roles
- 2.5 The influence of examiners in shaping the procedures
- 2.6 How a final decision is made about the outcome

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