

HE Bioscience Teacher of the Year 2020 Application Form

Dr Peter Klappa – University of Kent

1. Individual excellence in the development and implementation of teaching bioscience

In not more than 500 words please outline, with evidence (references are not included in the 500 word limit), how the candidate displays individual excellence in the development and implementation of approaches to teaching that have proven successful in promoting bioscience student learning and achievement

As the Master of a College and a Reader in the School of Biosciences at the University of Kent (UoK) Peter is in the unique position to combine innovative teaching with the provision of a supportive learning environment.

Excellence in teaching - Peter is fascinated by the power of 'disruptive' technologies and their applications in teaching. For example, Peter has developed strategies to mark large numbers of exam scripts in a short period of time, yet giving students detailed and comprehensive feedback. In the last exam period, he marked 240 scripts within 1 day; each student received personalized feedback with at least 1 page of A4 of comments and suggestions for improvement.

Peter has created over 400 video tutorials and lecture captures to provide students with resources to increase their learning. Most of these resources are available on his YouTube channel (<https://goo.gl/OaVm8N>) and can be used by students and educators around the world. Hit-counts and comments indicate that these videos are highly appreciated - Peter has over 6500 subscribers with more than 1.6 million views from across the world, which indicates a very strong international impact of his teaching.

In a recent project, funded through the University's 'Teaching Enhancement Support Award' Peter developed innovative techniques to make his lectures and workshops more accessible through life-streaming of teaching sessions. For this ground-breaking work he was named by the Joint Information Systems Committee (JISC) as one of the top ten Higher Education Social Media Superstars in 2017. Peter is now using this technology in all his teaching, thus enabling students to participate in lectures and workshops, even when they are unable to attend a teaching session in person.

In his latest project Peter is enhancing numeracy skills with an unlimited set of questions that allow students to practice the material they learnt in lectures; and apply these skills to typical problems in Biosciences. Comments from students clearly show that they find these questions very useful and beneficial.

Peter has received several prizes from Kent Student Union in recognition of his teaching excellence, the most recent one being an 'Above and Beyond Award' in 2018. Students said that '*Dr Klappa has a way of explaining techniques, methods and theory in a very simple, easy to digest way, regardless of topic. His use of social media for remote viewing of live lectures has been incredibly useful as it records questions and feedback in the form of written comments...*'

Supporting student with exam anxiety - A considerable proportion of students suffer from exam anxiety, which Peter frequently deals with in his role as College Master. To support those students, Peter has initiated, organised and evaluated a project in collaboration with a clinical hypnotherapist. In initial pilot projects he found that clinical hypnotherapy is highly effective in reducing exam anxiety. Following on from this pilot study, Peter has now undergone training as a clinical hypnotherapist, allowing him to support Bioscience students in developing their self-confidence and to excel in exams and tests.

2. Involvement in scholarly and professional development activities

In not more than 500 words please describe all scholarly or professional development activities that the candidate has undertaken, which have influenced and enhanced the learning of bioscience students

In his role as College Master, supporting over 3000 students, Peter has undergone extensive CPD in a number of essential regulatory procedures, eg GDPR (2018, UoK), PREVENT (2019, UoK) and Equality, Diversity and Inclusivity (2017, UoK). He is also a Designated Student Safeguarding Officer (CPD received 2016, UoK, and 2019, UoK).

For his most recent project on enhancing numerical skills through unlimited questions Peter is currently learning web-design and JavaScript through an accredited course on Udemy. This project has resulted from his research into metacognition, which demonstrated that learning is strongly supported by frequent low-stakes testing, followed by immediate feedback. To further his understanding of current developments in Higher Education Peter has successfully completed a part-time MA in Higher Education (2018, UoK). Following on from his MA research project entitled 'Clinical hypnotherapy as a tool to overcome exam anxiety in students' Peter decided to train as a professional clinical hypnotherapist. He completed this training in 2019 and is now fully qualified to practice in the UK. One of Peter's areas of expertise is to support learners in developing their self-confidence and to overcome performance and assessment anxiety. To further improve his leadership skills Peter has successfully completed a part-time 1 year CPD course on 'Leadership for Areas of Significant Responsibility', accredited by UoK, which placed strong emphasis on topics like 'Managing change', 'Analysis of Organizational Structures' and 'Development of the Workforce' to name only a few (2018, UoK).

Approximately 15 hours per week of Peter's spare time are spent on online activities directly related to his teaching and improvements of it. He frequently participates in several online discussion forums (eg Facebook and Twitter) and regularly screens social media (eg Twitter @WeAreTeachers, @edutopia etc) for innovative ways to deliver bioscience teaching.

Peter is a member of the Association of National Teaching Fellows, a Senior Fellow of the HE and a member of OneHEA. His continuous engagement with these institutions has allowed him to develop a very strong professional network of practice. To keep abreast with the latest innovations in education technologies Peter has regular informal meetings with our Faculty Learning Technologists. Peter is also an Associate member of the Association for Learning Technology (ALT), a very active community of Learning technology enthusiasts who share the latest education technology trends and innovations in the field.

3. Supporting colleagues and influencing learning

In not more than 500 words please provide evidence of how the candidate supports colleagues and influences bioscience student learning beyond their department and institution

A key aspect of Peter's scholarly work is to provide less experienced colleagues with support; and share the findings of his innovative teaching approaches with the wider community. Peter delivers regular workshops on 21st Century Teaching skills, Teaching with Technology, Introduction to University Teaching and Lecturing Skills. These workshops are part of the GTA training programme and PGCert programme, managed and organised by the University of Kent. Feedback from the participants has been overwhelmingly positive. For example, @FWWcartoonPip tweeted '*Really good skills session with @pk_kent all about teaching and using technology to do it. Lots of things to try now*'. Another participant said, '*Your session was one of the highlights of the PGCHE for me*'.

Other participants commented:

"Dr. Klappa is very enthusiastic about the use of technology in teaching. This is one of the best workshops I have attended so far. I would recommend that this workshop be part of the compulsory workshops for all GTAs and new lecturers in the university. I learnt a lot of new stuff, including student psychology."

"The workshop was very outstanding as the trainer provided all the needed skills necessary to be a good lecturer or teacher. All the unanswered questions I had prior to the workshop were eventually answered."

"Dr. Klappa provided all the necessary tips necessary for a successful seminar or lecture. The microteaching experience was superb as it offered me an opportunity to practice my acquired teaching skills and constructive criticisms from my colleagues has helped shape my teaching knowledge and skills. It was a nice experience watching other participants demonstrate their teaching capabilities. In all the workshop was magnificent and wonderful."

"It was valuable and very useful workshop for postgraduate researchers in particular who would be teaching during the course of studies."

Peter mentors teaching staff when they apply for Senior Fellowship of the HEA and advises on NTFS applications from colleagues.

In 2015 and 2016 Peter was a member of the Advisory board for British Educational Training and Technology Show (BETT), where he also gave invited presentations at the world's largest EdTech training and technology event. Peter has given several workshops about his pedagogical work and technological innovations, e.g. workshops at the FEBS Education conference on Assessment and Feedback and on Teaching with Videos (2016, 2017, 2018), He was invited to conduct a full-day workshop at Liverpool Hope University on e-learning (2016) and at Leicester University on Assessment and Feedback (2015). Peter also presented his latest work on numerical skills development through unlimited practice questions at the 2019 UK Biosciences Education Summit in London. All presentations were very well received by the participants.

Peter has published some of his work on teaching:

Klappa, Peter (2019) Lectures in a virtual space - live-streaming on Facebook. In: Bilham, Tim, ed. Reframing space for learning: Empowering Excellence and Innovation in University Teaching and Learning, 2019, Palgrave MacMillan.

Klappa, Peter (2015) Framing Excellence in teaching: Is it the right thing? RI Research Intelligence, 2015 (128). <http://kar.kent.ac.uk/64931/>

Klappa, Peter (2015) Innovative pedagogies series: Videos for learning and teaching. Technical report. Higher Education Academy <http://kar.kent.ac.uk/64930/>

4. Exhibit innovation that has proven to improve their teaching practice to enhance student learning

In not more than 500 words please provide evidence of how the candidate exhibits innovation in their teaching practices to enhance student learning

Two of Peter's most recent innovations to enhance student learning are highlighted below.

Live-streaming of lectures and workshops

Peter has pioneered live-streaming of teaching sessions on social media, which makes learning more accessible for students with different learning preferences. It has also shown to be useful for students who find it difficult to attend face-to-face sessions (eg due to mental health problems or work/family commitments) or who are on placements. For his pilot project on 'Live-streaming to Facebook' Peter received recognition as one of the top ten Higher Education Social Media Superstars in 2017 <https://goo.gl/WX1jZE>, also mentioned in the THES <https://goo.gl/BiYFnJ>. The judges commented, 'Peter is a shining example of how to make learning more accessible with technology. Facebook Live hasn't had massive adoption in HE learning yet but maybe Peter's success will help to change that.'

Students said:

"It is a good way for those that cannot physically attend a lecture to still be able to learn the material and to not fall behind. It is also helpful for learners that take more time to process things as there is the option to rewind if confused."

"Took a lot of stress away from the experience as if I was running late or hadn't eaten that day or didn't feel well, I could easily watch the lecture live from home or easily catch up afterwards. Also, being able to easily access lectures on youtube really helped when rewatching the lectures, as the speed of the recording can be easily changed to match the speed in working at."

A student with a disability reported that the live-streamed sessions "... are great for when I am too overwhelmed to go to the workshops. They are also easy to access for revision."

Enhancing numerical skills with unlimited practice questions and video tutorials

Practice tests are an effective way to consolidate learning [Dunlosky, 2013]. By presenting the learner with a similar question, but different values a 'proximal learning' approach is utilized, which has been shown to be an important step for achieving mastery [Metcalfe, 2009].

Peter has designed computer programmes that produce an unlimited amount of practice questions, relevant to the Bioscience curriculum. All questions are accompanied by short video tutorials and the correct answer. Questions and tutorials are available from a specifically designed website <https://sites.google.com/view/practicecalculations/home>

Students said:

"An aspect of your website that I really appreciated was the videos giving examples of how to complete the question given. This gave me huge confidence in going forward to the exam."

"Absolutely loved this, it was an invaluable revision tool. Really helped in my understanding and confidence."

"... this website allowed me to make good use of the skills I have learnt. It helps me to make sure I have gotten the concepts right and I can therefore apply them to exams and in class tests. Thank you very much!"

"I found it really helpful to practice varieties of the same question and is a good way for me to learn."

References:

- Dunlosky, J. et al. (2013). Improving Students' Learning With Effective Learning Techniques: Promising Directions From Cognitive and Educational Psychology. *Psychological Science in the Public Interest*, 14 (1), 4-58.
- Metcalfe, J. (2009). Metacognitive judgments and control of study. *Current Directions in Psychological Science*, 18, 159-163.