

Student Nominating Statement for Angela Allen

We are delighted to inform you that you have received a nomination from the following students:

Jodie Burnside Conall Keenan, Aakarsha Khosla, Christina Lauro, Ben Carlin, Anna McLaughlin, Chloe McMullan, Jack Eddie Smith, Courtney Shek, Ben Collins-Sheerin, Rebekka Campbell, Diane Murdock, Adam McClenaghan, Annalisa Misra, Chris Morrow and Ben Wisonser

Their nomination statement is as follows:

I have never met a lecturer during my time at Queen's who cares as much about the quality of the education that students receive as Angela does. She works tirelessly to ensure all students receive the high standard of feedback they deserve. Which is remarkable as her level 1 class contains close to 400 students. Adapting to student needs she provides extra classes and records all lectures to ensure no student gets left behind.

She is a true inspiration and is passionate about her work this reflects in her teaching. As an intelligent female in a position of responsibility within EEECS she is exactly the person who is needed to inspire female students in IT.

QUB TEACHING AWARDS

APPLICATION FOR STUDENT-NOMINATED TEACHING AWARD 2016

Contact details	
Name (including title): Ms Angela Allen	
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Number of years teaching in higher education: 15 years	

APPLICATION FOR STUDENT-NOMINATED TEACHING AWARD 2016
Angela Allen, EEECS

1. PREVIOUS TEACHING AWARDS (200 words maximum)

If you have ever previously won a Queen's University Teaching Award, please note the year and category (eg Rising Star, Team etc) below. You should also provide a short explanation of how the work outlined in this application differs from the work for which you were previously recognised.

Not applicable

2. CONTEXT FOR THE APPLICATION (300 words maximum)

Please provide a brief summary of your application and a context for your work. Examples of the information you might include are; the subject you teach or the area of learning support you work in, the type of learning and teaching/learning support activities you are involved in, how many learners are involved, your particular learning and teaching/learning support interests and an outline of your overall teaching/learning support philosophy?

Context for Application

I joined Queen's in 1997 as an Undergraduate Computer Science student and became involved as a student demonstrator on programming modules. This led to a passion for teaching and learning, and an ambition to be involved in educating future students in the subject.

I was fortunate, upon graduation, to be employed as a Teaching Associate in Queen's Computer Science department and as part of this role became focussed on enhancing the learning and more specifically the assessment processes within the modules I was responsible for. Initially these were small postgraduate taught modules of no more than 30 students but in my current role as Lecturer (Education) involves 450 undergraduate students in one programming module. Therefore maximising student learning, given the limited amount of one-to-one staff-student contact time and the complexity of learning programming, is very important to me.

I believe that consideration of assessment and the type of feedback to be returned is a fundamental part of curriculum development. In particular, the concept of formative assessment for formative purposes, as this can help motivate students to learn beyond a surface level. In 2010 I started using audio to return detailed feedback to students on formative assessment and subsequently included the use of video alongside audio to make the feedback a more visual experience for the students.

My passion and interest for Computer Science Education has prompted my recent appointment as Assistant Director of Education (ADoE) for the School of Electronics, Electrical Engineering and Computer Science (SEEECS). I have responsibility for the day-to-day management of all programmes in the School including dissemination of my knowledge and experiences in learning and assessment and also, from an operational perspective, curriculum reviews and student progress.

Therefore I am extremely humbled to be submitting this application for a student-nominated award.

3. DISCUSSION

You should illustrate your discussion throughout with reference to specific learning and teaching/learning support activities. You should also provide examples of the influence of learner feedback on your learning and teaching/learning support practice.

(a) Promoting and enhancing the learners' experience (1000 words maximum)

Background

During my 15 years at Queen's I have been responsible for many modules at all stages of undergraduate and postgraduate taught courses. This has provided me with many opportunities for reflection of my teaching and assessment practices. In 2010 I presented a paper at a conference on the use of audio to return feedback to students which quickly escalated to video alongside audio for feedback on programming tasks. This received very positive feedback from students and is something I have continued to incorporate as the number of students on modules has increased. I believe this ensures I am still approachable to students as the videos act as a one-to-one support and therefore make students feel more at ease getting in contact.

Video feedback on practical tasks enabled me to view and understand why code wasn't working.

Current Module

CSC1011/1012 *Fundamentals of Programming/Programming Challenges* is a first year module offered on all Computer Science degree pathways and taught over both semesters. It is a compulsory, double-weighted module that all students must pass in order to progress to Stage 2. Approximately 440 students are enrolled on the module each year and most have no prior knowledge of programming (more than 85%).

The module aims to introduce and develop programming skills of students through live coding in lectures and practical sessions. The students are encouraged to work independently and are provided with many additional tasks that should be completed outside of the scheduled learning events.

Lectures and Practical Sessions

Level 1 students find the transition from school to university difficult (Wells, 2012) and therefore the tradition of a more formal lecture alongside a two-hour practical is how this module is scheduled. However, as programming is an applied subject the lectures are more interactive than the traditional chalk-and-talk type afforded by just a PowerPoint presentation. The PowerPoint presentation is used as a signpost for students to the main topics and important programming terminology. However, most of the lecture time is spent coding in Java within the environment that the students will have to use for assessment. Students are encouraged to bring their own laptops, the PowerPoint and code are uploaded to QOL prior to lectures and therefore students are able to follow and update the Java as I code live in lectures. All of the lectures

The live coding examples are helpful to see exactly how code should be correctly implemented, being able to access the java files online also helped as I was able to run through code from the lectures myself.

are also recorded and uploaded to YouTube to allow students to revisit the content, pause it, rewind it and take it in at their own pace. Recorded lectures have also been supported by Disability Services in terms of best practice for note taking. One lecture in each semester is taken by LibertyIT, a local IT company, which engages students with employers from an early stage in their chosen course and also links the academic content to relevant industry standards.

Better notes equal better results and as note taking can present as a significant barrier for some students with disabilities the lecture capture is really supporting their needs, (Disability Services)

The practical sessions then take place in two stages; the first part is a step-by-step set of instructions to walk-through coding theory described in lectures. The second part is designed to be “do it yourself”, in that, the students are presented with a number of problems that they are encouraged to solve on paper, code and discuss any problems in the next practical session with demonstrators who are able to provide one-to-one support.

Good teaching practical was evident throughout the module. Computing terms were well explained and demonstrated. The tutorials were well prepared and a very high level of support was given in both lectures and lab sessions. Lectures were recorded and made available online. Angela is one of the best lecturers I have ever been taught by.

As students come to this module with very limited prior knowledge of programming weekly tutorials have also been organised over the last number of years to allow students to come and ask questions. There are at most 30 students at these sessions offering a much more dynamic, one-to-one and interactive session.

Assessment and Feedback

I redeveloped the module three years ago to remove the heavily weighted unseen written examination at the end of semester which is known to encourage rote or surface learning (Race, 2006). As this module aims to develop programming skills students need to demonstrate that they can programme. The new assessment strategy involves two unseen practical examinations set out as a problem that has to be implemented in Java and one group assignment. The two unseen practical examinations take place in a computer lab; the first in the middle of semester 1 and the second towards the end of semester 2. The purpose of the first practical exam is to make sure that students are grasping the basics and encourage them to adapt independent study early to ensure successful completion of the module. The purpose of the second practical examination is to assess individual learning of the core learning outcomes as the main assignment is group based. For both of the practical exams students receive tailored criteria-based feedback which as, Brookhart (2008) states, can be a powerful force for learning.

Angela is extremely approachable and understanding. She handles the large class well and creates an environment I find greatly enhances my studies – overall she is very supportive!

The main assignment is organised from the start of semester 2 and submitted in week 11. Group work results in predictable issues, namely the ‘free-rider’ problem (Davies, 2009) that one or more students in the group will be awarded marks without actually contributing any work. Therefore, the assessment of the main assignment takes place through

presentations where each student is asked to give a short presentation on their contribution to the assignment and then questioned on specific parts of the code. This allows for instant feedback to the students and also draws attention to those students who can’t explain their own code allowing further probing as to how they approached the assignment. Furthermore, for those students who engage with the module, the viva results in deeper learning as they have to explain how they implemented their own part of the solution.

Summary

My passion for education drives me to ensure students get the most out of their learning environment, through the delivery of content, to assessment of learning outcomes and feedback on the assessment. The major challenge for me is the large number of students however I feel that I manage this well and still provide formative feedback to students from which they can improve if they engage with the content early. The recorded lectures also act as a mechanism of support for the students and these haven’t been a replacement for lectures as lecture attendance is still over 70%.

Angela allows a lot of students to come up at the end of the lecture to ask question. She really pays attention and is enthusiastic about helping.

(b) Supporting colleagues and influencing support for student learning (350 words maximum)

Colleagues

The Level 1 modules in Computer Science have high student enrolment (400+) and therefore I have worked closely with Teaching Associates assigned to my modules to enhance the student experience. This has involved sharing my best practice and also listening to and reflecting on the knowledge and experiences of the Teaching Associates to improve the resources that we disseminate and the assessment we deliver to students. Throughout my time at Queen's I have been involved in the quality review of educational processes and have been an active member of module and pathway reviews and Staff, Student Consultative Committees. More recently as ADoE I have also been able to disseminate good practice across the whole School, rather than purely for Computer Science pathways.

Peer Mentor Scheme

In 2011, in collaboration with Learning Development Service, I introduced the Peer Mentor Scheme to SEECS to support Level 1 students on Computer Science pathways both in terms of enhancing the student support network and opportunities for social engagement. In 2012 this was extended to all pathways in the School and involved a number of events; "homework" classes primarily to support Level 1 programming, Employer Events where a number of local companies (CyberSource and Kainos) came to Queen's to hold information evenings and hackathons and social events such as cinema nights, ice skating and bowling.

External

More recently, I have been working on a Department of Education and Learning (DEL) project to upskill local teachers in programming. This has involved the development and delivery of resources for teachers to help them learn coding, principally in preparation for the new A-Level in Systems Software Development.

Teachers are invited to Queen's one night a week for two separate courses. The first a twelve week course on object-oriented programming and the second a six week course on databases. To date we have had 100 teachers taking both of the courses and have received very positive feedback on the support provided to local schools. In addition we have provided the opportunity for Level 3 and 4 students to visit schools to support programming in A-Level classes.

This has been one of the most useful CPD course I have attended in 30+ years of teaching. The quality and accuracy of the materials provided make the resources relevant and directly useful for my classes. The standard of everything provided in this course was exceptional. I am confident that the long term benefits of this course will provide good quality students for QUB and programmers to meet the needs of the Northern Ireland economy. Thank-you to everyone involved.

(c) Ongoing professional development (350 words maximum)

I am committed to continuing my professional development as an educator to ensure that the students do obtain an exceptional learning experience. This is only possible through reflection of my current processes and enhancement of the learning and assessment opportunities I provide now and in the future. Coupled with this is the ever-evolving higher education environment and computing industry. Therefore, to remain effective my educational practices must be mindful of these evolutions to ensure they are in line with current technological change and industry standards.

In an attempt to achieve this I attend CED conferences and lunchtime seminars which have afforded me the opportunity to learn new techniques in delivering and assessing content and also to engage with colleagues (not just from Queen's). The most recent challenge has been that of large class sizes (400+) and the HEA invited me to the STEM Learning and Teaching Summit to disseminate my expertise and help develop its learning and teaching policy for Feedback in STEM subjects. Another vital element of support is the staff within the SEECS who are in the same position with regard to large class sizes and exploring ideas, sharing practices and managing resources has been invaluable.

In relation to industry standards the engagement with LibertyIT for the Level 1 module has been a fantastic insight into how programming works in practice. The seminars presented by LibertyIT staff have merged seamlessly with module content and provided the students with an opportunity, as soon as they arrive at university, to engage with an internationally based company.

The DEL funded project to upskill teachers has provided a means to shape the type and increase the quality of students applying to our degree programmes. Furthermore, it has provided opportunities for discussion with CCEA regarding both the new A-Level and GCSE specifications. I believe that having a rounded approach and view of education is important to enhance the experience for everyone.

References

Brookhart, S (2008) *How to give Effective Feedback to Your Students*. ASCD: Alexandria, Virginia.

Davies W.M. (2009) Groupwork as a form of assessment: common problems and recommended solutions. *The International Journal of Higher Education Research*

Race, P. (2006) *The Lecturer's Toolkit: A Practical Guide to Assessment, Learning and Teaching*. 3rd edition. Routledge:London.

Wells, D. (2012) Computing in schools: time to move beyond ICT? in *Research In Secondary Teacher Education* 2(1) pp. 8-13.