

APPLICATION FOR A RISING STARS TEACHING AWARD 2017

QUB TEACHING AWARDS

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(Open to individual academic colleagues who have been teaching within Higher Education for fewer than 5 years)

<b>Contact details</b>	
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Number of years teaching in higher education: Almost 3 years	

## APPLICATION FOR A RISING STARS TEACHING AWARD 2017

### 1. PREVIOUS TEACHING AWARDS (200 words maximum)

*If you have ever previously won a Queen's 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.*

N.A.

### 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?*

I apply for the Teaching Award primarily because one of the innovative assessment and learning approaches, namely the PeerWise platform, that I have implemented in my two large undergraduate classes (with around 330 students in total each year), successfully improved learning outcomes and enhanced learning experience, and more importantly this new approach can be used in a variety of modules in almost all disciplines and thus contributes to the **Education Strategy 2016-21** (e.g. Dynamic and Relevant Curriculum and Assessment and Student Support, and Innovative and Flexible Delivery).

In addition, the PeerWise platform, which I considered as the "most continuous" assessment and learning, becomes particularly useful after the University removed the January exams and put more emphasis on continuous assessment. More details about the impact of this new approach on both students' learning and my colleagues' teaching will be provided in section 3.

I have been working as a Lecturer in Finance at Queen's since July 2014. I am the module coordinator of two undergraduate modules, namely FIN1003 Financial Reporting and Analysis and FIN2006 Financial Decision Making, with over 160 students in each module. I deliver both lectures and tutorials. My primary teaching interests are in the area of financial analysis and corporate financial decisions. I am highly interested in identifying and using new technologies to improve learning experience and the effectiveness of teaching large classes.

Regarding my teaching philosophy, I strongly believe that teaching should be academically rigorous and practically relevant, and one of the most important educational goal is that our students should be equipped with higher order thinking skills (HOTs) (e.g. critical thinking and creativity), and some new technologies (e.g. the PeerWise platform I used in my teaching) could play a significant role in achieving this goal in an entertaining way.

**3. DISCUSSION (See Guidance Notes overleaf)**

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

**(a) How you are promoting and enhancing the learners' experience (1000 words maximum)**

**Technology used to enhance learner's experience**

PeerWise platform (<https://peerwise.cs.auckland.ac.nz/>)

**What the Peerwise is and why I use it**

PeerWise is an online platform developed by academics in the computer science department at the University of Auckland. PeerWise is free, user-friendly, but powerful. It provides a platform where students can create multiple choice questions, and other students can answer and make comments on the questions created by their peers. In brief, three main activities on the PeerWise platform are (1) creating questions; (2) answering questions; and (3) rating and providing feedback on questions. Taking all these three activities into consideration, an aggregate score, so-called PeerWise Reputation Score, is automatically calculated by the PeerWise platform to reflect each student's overall performance on this platform. In other words, students can increase the Reputation score by creating more high-quality questions, answering more questions correctly, and providing more feedback on questions created by others. PeerWise can thus be used as a continuous assessment method.

Using PeerWise becomes increasingly important for the following reasons. First, PeerWise allows the students to not only answer but create questions, which helps to develop critical thinking skills which is considered as a higher-order thinking (HOT) skill in Bloom's Taxonomy. Second, continuous assessment becomes increasingly important especially after the Queen's University changes the academic year structure, while PeerWise can be widely used as a new way of continuous assessment. More specifically, I use PeerWise in my teaching to address the following University/CED's Assessment and Feedback Principles:

- Encourage 'time and effort' on challenging learning tasks
- Provide good quality feedback
- Provide opportunities to act on feedback
- Encourage interaction and dialogue around learning
- Development of self- assessment and reflection

**How I use Peerwise**

Next, I will describe how I use PeerWise in my teaching as a new way of continuous assessment, and importantly how I motivate students in my class to actively use PeerWise. In addition, I will also present some statistics illustrating how actively my students have been using PeerWise. I started to use PeerWise since 2015 as a continuous assessment method, and there are over 500 students who have used

PeerWise so far. Most of the students really enjoyed using PeerWise. Arguably, PeerWise can be considered as the most continuous assessment and learning. This is because students use PeerWise very frequently. For example, some students even use PeerWise at 2am on Saturday and 1-2 minutes before they enter the lecture room.

Take one of my modules, namely FIN1003 Financial Reporting and Analysis (2015-2016), as an example, there are around 150 students who used PeerWise as part of their continuous assessment that contributes to 3% of their overall mark. Statistics in table 1 shows that most students used PeerWise actively. Specifically, 1,260 questions were created, and these questions were answered 17,493 times and 4,001 comments were provided. That is, an average student in the class created 8.57 questions, answered 119 questions, and provided 27.22 comments. Taken together, 211,927 words were written by these students, and an average student wrote 1,442 words.

**Table 1. Summary Statistics**

Module title	FIN1003 Financial Reporting and Analysis 2015-16 (UG Year 1, 150 students used PeerWise)	
	Total	Mean
Number of questions created	1,260	8.57
Number of answers	17,493	119
Number of comments provided	4,001	27.22
Number of words written	211,927	1,442

Students use PeerWise frequently throughout the semester. Figure 1 and 2 show the number of questions created by the students and the number of answers submitted by the students respectively. These graphs clearly indicate that the students tend to use PeerWise not just before the deadline of the PeerWise assignment but continuously during the whole semester, although there is a significant increase in the numbers of questions created and answers submitted before the deadline (which is not surprising). Figure 2 also shows that students answer more questions especially before the class test at the end of November, and some even use PeerWise before the final exam in January, suggesting that students believe that PeerWise is useful for the exam preparation.

To motivate students to use PeerWise actively, I issue weekly certificates to students whose PeerWise reputation scores at the end of each Friday are top 10, and also prepare a gift (e.g. a book written by Nobel Laureate in Economics) for the student with the highest reputation score at the end of the semester. In addition, students were told at the beginning of the semester that some of the high-quality questions created by themselves will be used in the class test. Specifically, five out of 30 class test questions were selected from the questions created by the students on the PeerWise platform.

Number of questions contributed per day

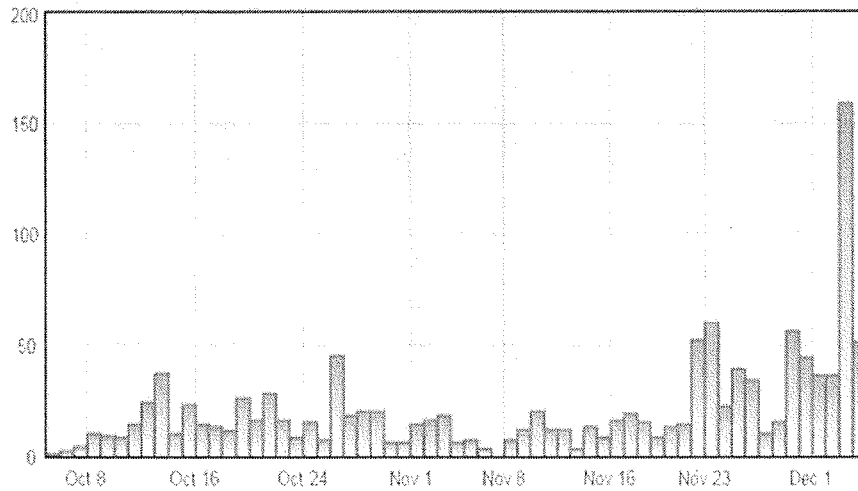


Figure 1. Number of Questions Created Per Day

Number of answers submitted per day

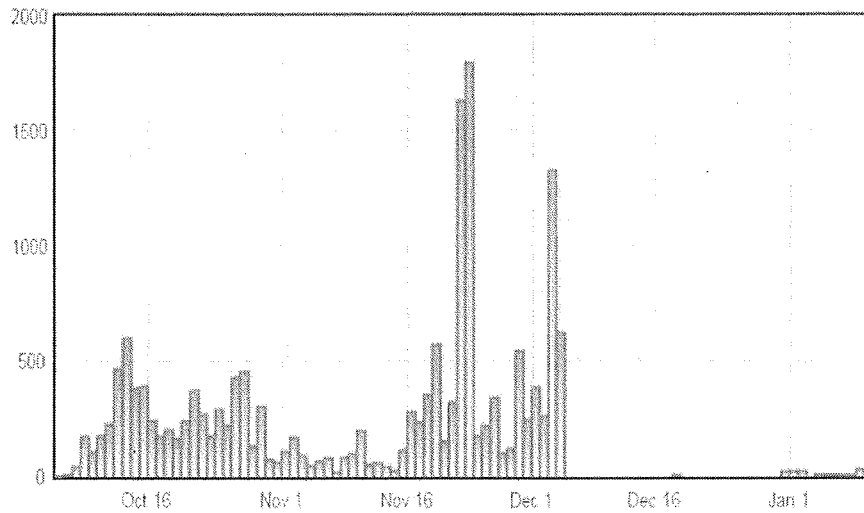


Figure 2. Number of Answers Submitted Per Day

Figure 3 indicates that there is a strong positive correlation between the PeerWise reputation score and students' class test marks, suggesting that those students who more actively use PeerWise tend to perform better than other students in the class test. Overall, PeerWise is a great tool which can improve students' critical thinking skills, academic performance, and at the same time enrich their learning experience.

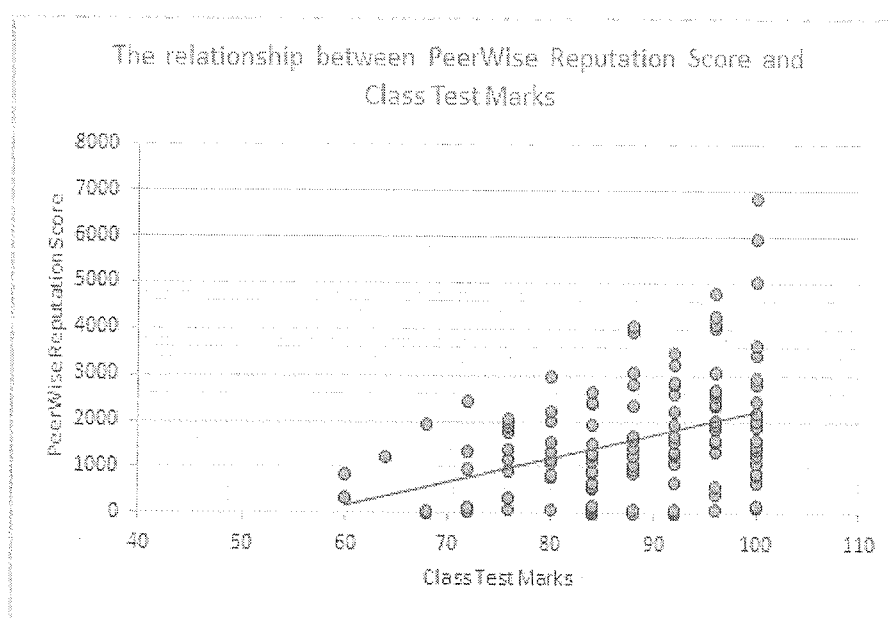


Figure 3. The Relationship between the PeerWise Score and Class Test Performance

### Student feedback and module evaluation

PeerWise allows collaborative learning. Students often find the questions and answers prepared by their peers highly useful, as suggested by the comments below:

- "Very well thought out and original question. ... Upon reading the explanation, the methodology of the question to reach the correct answer becomes very clear. ...";
- "This is a brilliant question ... I am glad to see that you've edited this question to include a different answer option as it has inevitably increased the level of difficulty ... "; and
- "Awesome question. Really though inducing and takes a new slant on a familiar style of question. Clearly have a much better grasp on this course than I do!"

The module was highly rated in the module evaluations with an overall score of 4.5 in 2014-15 and 4.3 in 2015-16 (see the table below). Students spontaneously mentioned PeerWise in the course evaluations, and suggested that PeerWise was a good practice which could be taken into other modules. Students provided many very positive comments about PeerWise in the evaluation form, e.g.

- "PeerWise platform was good, helped with understanding module", and
- "PeerWise was useful for revision".

Module: FIN1003 Financial Reporting and Analysis (Undergraduate 1 <sup>st</sup> Year)		
Academic year	2015	2016
Number of students	149	162
Overall Module Score	4.5	4.3
• The module was well-prepared and wellorganised	4.6	4.4
• The module learning resources (notes, webbased material, software, etc.) were accessible, clear and helpful	4.7	4.5
• The module was intellectually stimulating and challenging	4.4	4.3
• The criteria used in marking have been made clear in advance	4.6	4.5
• Assessment arrangements and marking have been fair	4.7	4.5
• Feedback on my work has been prompt	4.7	4.6
• Overall, I am satisfied with the quality of the module	4.6	4.3

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(b) How you support colleagues and influence support for student learning  
(maximum 350 words)

In this section I present evidence on how I contribute to the development of my colleagues' teaching at different schools of Queen's and the University's initiatives respectively. Various evidence on the university-wide impact of my innovative teaching approach (i.e. PeerWise) and comments from colleagues are presented in the table below.

In particular, [REDACTED] wrote a Case Study titled "Use of PeerWise in a first year Accountancy Module" based on my experience of using PeerWise, which might be shared in the CAA courses and the CED website (see **Evidence b.1**). I was invited to present at the **Higher Education Lunchtime Forum** on Using Peerwise in Nov. 2016. I was also invited by Dr [REDACTED] to share my experience of using PeerWise at the Education Away Day of the School of Engineering in Jan. 2017 (see **Evidence b.2**). I also shared my experience and relevant teaching material with Dr [REDACTED] who will use PeerWise in his English literature classes (see **Evidence b.3**). In addition, two colleagues in my school decided to use PeerWise in their own modules (see **Evidence b.4 and b.5**). Overall, my practice has both university-wide and school-level impact, and I hope that more and more students will benefit from using PeerWise.

Evidence of University-wide Impact	
Evidence b.1	[REDACTED], Educational Developer (eLearning), Centre for Educational Development ❖ "I have incorporated what you have sent me. ... Are you happy for me to share this in the <u>CAA course and potentially on our website?</u> "
Evidence b.2	Dr [REDACTED], Director of Education, School of Mechanical and Aerospace Engineering ❖ "One of my colleagues was at your PeerWise talk last week and was impressed with your work. I was writing to see if you would be interested in giving the same talk at an <u>Education Away Day</u> ... I'm keen to introduce the staff to options for formative assessment ... and based on what I have been told it sounds like <u>your approach would resonate with our staff very nicely.</u> "
Evidence b.3	Dr [REDACTED], Course Team Leader, BEd English, St. Mary's University College Belfast ❖ "Many thanks again for your terrific talk today on Peerwise. The level of detail and the thought you have put in to <u>your practices were extremely useful to hear about.</u> ... I hope to report back positive results from my English Literature classes!"
Evidence of Impact in the Management School	
Evidence b.4	Dr [REDACTED], Program Director, BSc Finance, Queen's Management School ❖ I shared my teaching material related to PeerWise with Dr [REDACTED] who will use PeerWise in his first year Financial Mathematics module this year.
Evidence b.5	Dr [REDACTED], Module Coordinator, Accounting for Managers, Queen's Management School ❖ I shared my experience and teaching material related to PeerWise with Dr [REDACTED] who has used PeerWise, as a continuous assessment method, in his second year accounting module and received very positive feedback from the students.

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**(c) Professional development activities you've undertaken and the impact of these activities on student learning (350 words maximum)**

I believe that one has to make continuous effort to improve teaching by incorporating feedback from students and colleagues, and reading education literature related to innovative teaching approaches and new technologies. I use PeerWise in my teaching largely because both the colleagues at the Queen's CED and some working papers written by the users of PeerWise at other top universities suggested that PeerWise is a very effective learning tool.

Actively participating the professional development activities is also important to improve my own teaching. Specifically, since I joined Queen's I attended quite a lot of training courses (e.g. Personal Response System; Questionmark; TurnitinUK, etc.) provided by the CED and many of the techniques discussed in these courses are very useful in practice.

In addition, I also attended the Higher Education Lunchtime Forum organised by the CED to learn from the best practices. As an evidence of professional practice, I was invited to give a presentation at the Higher Education Lunchtime Forum on Using PeerWise in Nov. 2016. I received very positive feedback from the audience after my presentation, and several colleagues decided to use PeerWise in their future teaching.

Observing colleague's teaching can be highly beneficial as well. I often observed more experienced lecturers' (e.g. Dr [REDACTED], Dr [REDACTED], etc.) teaching so that I can incorporate some of the good practices in my teaching to improve my students' learning experience. After observing my senior colleagues' teaching, I identified several good practices which were subsequently implemented in my own teaching. For example, students really like class activities, videos, and real-world examples and case studies, all of which make teaching more interactive, interesting, and practically relevant.

In sum, all the above professional development activities significantly improved my teaching and student learning experience in the past 2-3 years. To further develop my teaching skills, I will continue attending various training courses and events related to teaching, and keep learning from more experienced colleagues and implementing the best practices.