UNIVERSITY OF ABERDEEN

QUALITY ASSURANCE COMMITTEE

INTERNAL TEACHING REVIEW (ITR)

SCHOOL OF NATURAL AND COMPUTING SCIENCES

Panel Visit: Monday 23 November to Friday 27 November 2020

INTRODUCTION

1.1 The Internal Teaching Review (ITR) of the School of Natural and Computing Sciences was undertaken under the University's revised ITR Process and Procedures, maintained under review by the University Committee on Teaching and Learning (UCTL). The Process and Procedures are available here: https://www.abdn.ac.uk/staffnet/teaching/internal-teaching-review-6112.php

1.2. The ITR Panel was comprised of:

Professor Michelle Pinard	School of Biological Sciences Quality Assurance Committee
Dr Donna McCallum	School of Medicine, Medical Sciences and Nutrition Post-Graduate Taught Committee
Dr Susan Stokeld	School of Law Undergraduate Committee
Sofia Puentes	Aberdeen University Students Association
Dr Juliana Bowles	External Subject Specialist, St Andrews University
Dr David Keeble	External Subject Specialist, The University of Dundee
Dr Michael Seery	External Subject Specialist, The University of Edinburgh
Dr Dirk Schuetz	External Subject Specialist, University of Durham
Mr Craig Stewart	Clerk, Academic Services

1.3. The Panel considered the documentation provided by the School of Natural and Computing Sciences, by way of an evidence-based Critical Analysis (CA). In addition, prior to the meetings with the School, members of the Panel were provided with access to the School's Quality Assurance (QA) repository, containing the School's annual monitoring materials (Annual Course and Annual Programme Reviews (ACR and APR)), Student Course Evaluation Forms (SCEF), minutes from meetings of Staff-Student Liaison Committees (SSLC), and External Examiner Reports (EERs), as well as the minutes from various School Committees. Consideration of this documentation, along with the School's submitted CA, enabled the Panel to identify key themes for further exploration.

1.4. The Panel conducted the review with the School over a five-day period where they met with a range of staff, as well as undergraduate (UG), postgraduate taught (PGT) and postgraduate research (PGR) students. This report is split into four sections:

(i) Part A gives the overall impressions of the teaching provision within the School formed from the whole ITR process;
(ii) Part B covers the quality assurance aspects arising from scrutiny of the material provided prior to the visit and the initial discussion with the Head of School (HoS) and several key members of senior staff;
(iii) Part C covers the outcome of various meetings with staff and students, focusing on a small number of themes identified during Part B. It also details the Pedagogic Partnership Session, which involved more free-form discussion; and
(iv) Part D details the School action plan which will form the basis of the one-year follow-up report.

PART A: OVERALL IMPRESSIONS

2.1. The panel were impressed by the overall strength of the quality assurance documentation supplied by the School with the critical analysis considered to be detailed and comprehensive. The Annual Programme Reviews and responses to external examiners were also noted as being of a high quality.

2.2. The School showed a strong awareness of the intrinsic differences and needs present between the disciplines offered. Despite this, there was evidence of interaction between the four disciplines within the School.

2.3. The panel observed that there was a culture of collegiality and community evident within the School. Students reported that they felt that they belonged to the School and had a good relationship with staff.

2.4. The panel observed that there was evidence of commendable innovative practice with regards to teaching and assessment.

2.5. Feedback received during the ITR indicated that some students are unclear on where to go or who to approach for help in some instances, however the panel recognised that staff were generally responsive to issues that were raised.

2.6. The panel were impressed by the School's continued connection between alumni and current undergraduate students.

2.7. The panel observed that discussions with students were heavily influenced by the concurrent impact of the Covid-19 pandemic.

PART B: QUALITY ASSURANCE

3.1 Themes for discussion

The themes for focused discussion agreed with the School prior to (items (i)-(iii)) and during (items (iv)) the visit were:

(i) **School Structure and Ways of Working** The panel were interested in how the four disciplines within the School co-ordinate their activities. This included how consistent processes were across

the School, how examination meetings are conducted and the consistency of workload models. The panel were also interested in how School administrative processes work and how consistent these are across disciplines. The panel also sought to learn how the School was addressing gender imbalance.

(ii) **Curriculum** The panel noted that there appeared to be several programmes with relatively few students enrolled. The panel wanted to find out more about how decisions are made to retain courses and programmes. The panel also noted that the curriculum map identifies courses where a benchmark statement is building or consolidating. The panel wished to know how this determination was made and what the School learned from the curriculum mapping exercise.

The panel were aware that the School of Natural and Computing Sciences is a pilot school for embedding intended learning outcomes (ILOs) into their courses, although this project is currently on hold due to the COVID-19 pandemic. The panel wanted to know how valuable ILOs are from the School's perspective and what the School hoped to gain from this exercise.

(iii) **Resources** In the Critical Analysis, the School had noted concern about resources for online provision, new programmes and January starts. The panel wished to know how the School envision managing this and the impact on existing staff.

Teaching facilities (e.g., blackboards, whiteboards, dedicated computing rooms) were raised as a concern in the Critical Analysis. The panel wanted to know if the School was making any progress addressing these concerns.

The Chemistry APR, made mention of a shortage of admin support and staff workloads (particularly in physical chemistry). The panel hoped to learn if this is this a problem across the disciplines and if so, how is was being addressed.

(iv) **Student Experience** The panel wished to ascertain what the School's practice was in supporting student retention and if there were issues relating to this challenge.

The panel observed that the School uses demonstrators to aid lab teaching. The panel wished to learn how their competency and expertise is ensured. Additionally, the panel wanted to understand how it is ensured that PGR supervisors undergo appropriate training and if there was any school specific training for PGR students.

It was hoped to understand more about staff/student ratios and if it was felt that these are adequate to deliver the courses as designed. In the Critical Analysis the School highlighted the need to support direct entry students. The Panel sought to establish how this need is being addressed, if it is working, and how this is measured.

(v) **Student Achievement** The panel noted concern about pass-rates. It was queried how the School monitored these data. The panel hoped to know how degree classifications compared across the School's programmes, how this varied across disciplines and if the School anticipated how the new classification rules would impact their results.

The panel wanted to ascertain how mandatory attendance affects examination performance and if the School felt that MCQ exams were sufficiently robust.

3.2. Discussion Points from Initial QA Session with the Head of School and Senior Members of Staff

3.2.1. The panel observed that is was clear that School consisted of four disciplines and wished to know how processes are shared. It was explained that this was managed by the School executive consisting of the Director of Teaching, the Head of School and the Heads of each discipline. Processes are shared by the use of a single School office with members of the administrative team assigned to each discipline. There were exam officers present in each discipline and the School were not aware of any instances of processes being duplicated. The School added that this approach meant that the workload was shared and spread across the School.

3.2.2. A gender imbalance had been noted within the School. Initiatives including Athena Swan aimed to address this, however, plans to upgrade from a bronze award to a silver award had been put on hold due the Covid-19 pandemic. The School had implemented outreach in local schools and supported initiatives such as 'Coding for Girls' by providing support and space.

3.2.3. The School's post-graduate provision had been reviewed in the 2018-19 session with areas for cessation identified, for example, Oil and Gas Chemistry. Data Science had been identified as a potential area for future growth with high demand. A Masters programme in Industrial Pharmaceuticals was due to commence in 2021. The panel queried how post-graduate provision fit in with the School's teaching and learning. It was explained that there were four directors of undergraduate pathways with individual directors for postgraduate programmes. It was noted that the recruitment process works differently to the undergraduate process, with involvement from the international office.

The School map resources to opportunities. New academic staff had been recruited in response to the School's growing portfolio. The School also identified opportunities to share courses across programmes wherever possible, especially when designing new programmes.

Courses with low numbers are reviewed as external body accreditation allows opportunities for development and rationalisation. As an example, the School's pivot to Data Science was inspired by a decline in Physics student numbers. It was noted that most programmes utilise common teaching, allowing smaller programmes to remain viable for relatively little additional cost.

3.2.4. Feedback from students was monitored by reviewing course feedback forms for signs of problems. Responses were given where possible, but it was acknowledged that some students feel that the feedback loop is not closed. Efforts had been made to address this, but it was accepted that further work was necessary. As the feedback takes place quite late in the semester, it was suggested that interim feedback could be sought earlier in courses, however care would be necessary not to overburden students with request for feedback. Open sessions had been trialled whereby students are given suggestions on how immediate feedback can be given, how Annual Programme Reviews operate and how changes based on previous feedback had been implemented. Inductions were also used to inform students of implemented changes with videos and some use of discussion forums was used to give notification of these. It was noted that the staff-student liaison committee for Physics made efforts to act immediately on feedback where possible.

3.2.5. It was confirmed that Chemistry demonstrators are drawn from a pool of PhD researchers. These demonstrators are given induction sessions and guidance on common questions. The Postgraduate Research School may also provide further training on introductions to teaching. Demonstrators are

initially invited to shadow more experienced demonstrators. Super-users are nominated for specific instruments based on PhD experience.

3.2.6. The student experience for post-graduate researchers is largely managed by the post-graduate research school who deliver training programmes. It was noted probationary academic staff also undertake supervisory training sessions. There was variance between the disciplines in the School, although all students have a minimum of two supervisors. School specific training is provided in terms of discipline specific knowledge. Each discipline has a post-graduate research co-ordinator with one of these acting as the overall School post-graduate research co-ordinator.

PGR students typically identified with their discipline rather than with the School, although there were some cross-discipline PhDs including Physics/Mathematics. As the disciplines have different research cultures it was difficult to apply a blanket approach, although there is wider oversight at the administrative level. Problems with social spaces to aid cross-discipline collaboration were acknowledged, with the Meston Building not conducive to this.

3.2.7. The School sought to address historically unsatisfactorily low retention rates by assigning a retention officer in each discipline. Retention officers work closely with the School office to monitor student attendance and take early action. Poor mental health was noted as a recurring issue amongst students at risk of dropping out.

3.2.8. Pass-rates are monitored by compilation by the School office which are then reviewed for signs of problematic performance to ensure that teaching and assessment have been set appropriately.

3.2.9. The School welcomed further views on how to incorporate group-work into its teaching and learning. Chemistry courses had made use of self and peer assessment, ensuring to make it clear to students that these are group exercises. It was confirmed that sessions are held within the School to share instances of good practice.

PART C: QUALITY ENHANCEMENT; OUTCOMES OF DISCUSSIONS WITH STAFF, STUDENTS AND THE PEDAGOGIC PARTNERSHIP SESSION

4.1. Theme: School Structure and Ways of Working

4.1.1. Students reported mixed experiences across disciplines in relation to seeking support. Some undergraduate students within Computing Sciences noted that they were unaware of who their designated personal tutor was but had felt comfortable approaching individual members of staff to resolve issues. Students were aware of the University level support that was available to them through Student Services. Students would appreciate more personal tutor contact, with some Computing Sciences students noting receiving none and others in earlier stages reporting receiving a good quality of support after reaching out to academic staff. Students studying Mathematics reported positive experiences including individual meetings, staff being accessible and open to helping and fast resolution of raised issues. Physics students reported a similar experience of pastoral support with tutors and lecturers being helpful and responding quickly to concerns while Chemistry students had appreciated additional sessions being booked to help answer queries. Post-graduate students felt that it was easy to get access to staff and that administrative staff were quick to respond to queries.

4.1.2. Postgraduate taught students had a good understanding of information on Student Services and how to make use of them and found staff within the School to be approachable.

4.1.3. Postgraduate research students across all disciplines felt supported by the School and appreciated the level of communication, citing the School-wide newsletter.

4.1.4. While it was more difficult to gauge due to blended-learning, post-graduate taught Computing Science students saw no indication of a strong gender imbalance and Chemistry post-graduate research students reported a seemingly equal balance. A heavier imbalance was reported amongst taught Physics post-graduates. Female staff did not feel that there was any negative impacts related to gender issues within the School and were kept aware of opportunities such as women orientated committees; it was noted, however, that there was more difficulty feeling heard due to lack of seniority.

4.1.5. It was confirmed that academic line managers disseminate information from the School Executive and that information is shared with teaching directors.

4.1.6. Examples of good practice are shared at meetings of Teaching Directors. This consists of information being fed into the meetings and noted for sharing more widely. Academics in Mathematics and Physics felt that they received no explicit communication from the School Executive and noted that there was potential for greater communication, welcoming a structure under which staff could meet. Computer Science academics appreciated that the filter between the School Executive and the wider staff meant that information that is less relevant could be omitted preventing an overload of information. It was further suggested that an e-mail digest could allow staff to be fully informed without being overloaded. Staff are given the opportunity to feed their thoughts forward.

4.1.7. Computing Science staff were aware of plenty of opportunities for professional development through the Centre for Academic Development (CAD), however staff time had limited scope to take advantage of the opportunities available. In Mathematics, continuing professional development was supported by the academic line manager. There was a perception amongst some academic staff that the role of the Head of School had changed, and that the HoS no longer met with applicants for promotion. Academic mentors and heads of disciplines were felt to be supportive.

4.1.8. Outside of probationary periods, there was little culture of peer assessment of teaching within the School, although staff were aware that this could be arranged by request. Academic staff in the meeting expressed support for the idea of peer auditing and sharing of good practice. Those who had experienced peer review of teaching while on probation found the experience helpful. It was noted that staff in Physics often shared the delivery of courses between two co-ordinators, but the view was echoed that peer auditing would be helpful.

4.1.9. Mathematics and Computing Science courses made use of level 4 students to tutor students in earlier stages. It was queried how the efficacy of this is measured. In Mathematics, tutors were chosen on academic performance and capability. The use of student tutors was helpful for reducing workloads of staff. Computing Science students were invited to tutor if they had completed the module and performed well. Training is offered to tutors, but it was not a prerequisite. It was confirmed that there was no special limit to hours of tutoring that could be offered and that

student tutors were paid a nominal amount. Chemistry only made use of PhD students as tutors. It was noted that Physics students had responded well to peer teaching.

4.1.10. It was confirmed that there were no student representatives on individual discipline teaching committees. There was concern about sensitive issues being raised or debate around students, however it was recommended that these could be dealt with as reserve business or resolved prior to ratification at meetings.

4.1.11. Undergraduate students studying chemistry praised the use of online laboratories as a response to the Covid-19 pandemic.

4.2. Theme: Curriculum

4.2.1. Staff were mostly in agreement that there was too much assessment, with some evidence of 'assessment creep', with the exception of Mathematics courses. Academic staff in Chemistry had identified redressing this as an ongoing project. The consensus in Chemistry was that exams should be retained, but it was acknowledged that views differed on this. Decisions on how to assess were largely made at the discipline level.

4.2.2. Early career staff had reported difficulty implementing creative forms of assessment. This typically happened at course level and caution was urged to ensure that students do not experience an overload of novel, untested assessment. It was recommended that Directors of Undergraduate pathways are consulted to ascertain how assessments, skills and learning outcomes link. While the change progress can be slow, there is scope for flexibility.

4.2.3. Scope to improve the communication of intended learning outcomes to students was identified. Students agreed that they would like to see further clarity around assessment.

4.3. Theme: Resources

4.3.1. Physics students felt that some recorded lectures, notably those from previous years, were of a lower standard compared to more recent lectures. A request was made that updated lectures are used as blended-learning continues. Some Computing Sciences students reported issues accessing lectures during the current half-session and felt awkward asking questions in online learning environments where there was no opportunity for one-on-one instruction.

4.3.2. PGR students reported that he Chemistry laboratories were operating on a shift-system as a response to Covid19. The reasoning behind this was understood, but it was noted that this limited some opportunities within labs. International students raised a concern about lack of laboratory time yet still being expected to pay full fees. Time in labs could be stressful as students were both catching-up and aware that their current allocated time was limited.

4.3.3. Staff in Physics reported finding delivering teaching with currently available resourcing challenging, but noted that the use of pre-recorded lectures had proven to be a helpful tool. Chemistry staff acknowledge the desire from management to see more successful courses established, but felt under-resourced to see this through, a problem exacerbated by the pandemic leaving no dedicated time to design new courses. Computing staff noted a similar experience.

4.3.4. It was confirmed that processes were in place to review current course provision in order to free up resources for new courses. This was considered from the perspective of student numbers and student satisfaction. It was also confirmed that the Head of School made efforts to seek further resources for the School.

4.3.5. The ratio of administrative team support to staff and student numbers was understood to be low in the School. Academic staff would often find themselves carrying out administrative tasks to avoid further overburdening the administrative team.

4.3.6. Staff were encountering difficulties with a lack of chalkboards and whiteboards, with difficulties negotiating the addition of new resources through estates and IT/AV support. There was also difficulty in ensuring that chalkboards were cleaned and the motors controlling their positioning broke frequently. This impacted Mathematics, Organic Chemistry and Physics courses, in particular. Calls were logged using the webform flagging these issues, however, it was not clear to staff how they could trace the progress of their calls. The School Administration Manager and Heads of Disciplines became involved to ensure progress was made on these issues. The timetabling database recorded if boards were available, but did not provide any details of their size. Staff had been invited to test the smartboards that will be available in the science teaching hub. It was felt that these were appropriate and of good quality.

4.3.7. Only Chemistry courses would be making use of the science teaching hub. This was seen as a good opportunity to aid recruitment. It was planned to utilise paperless labs by making use of tablet devices. It was suggested that a dedicated information technology floor in the hub would have been a benefit for Computing Science students, however the hub only supported teaching environments that were accessible to all students. This meant that no dedicated computing science provision would be in place. This resulted in Computing courses were finding that they were relying on out of date technology and students having their own laptops. In cases where students do not have laptops, desktop access is provided, but this is not felt to be adequate.

4.3.8. The panel queried how technical support in Physics would be impacted by the science teaching hub. At present there was no Physics technical support, but it was hoped that this could be addressed. Physics teaching was to remain in its current location.

4.3.9. Projects are currently delivered as 60-credit courses, with the intention that the course will revert to a weighting of 45 credits within the next two years. It was queried if the workload was similar across programmes and if there was appropriate resourcing for this delivery. Physics had recently increased their UG project to 45-credits. This increase had not affected resources or the way projects were supervised, but more was expected from students. Chemistry students, on both the MChem and the BSc routes, had noted the project as a highlight of their student experience.

4.4. Theme: Student Experience

4.4.1. Some disparity across disciplines regarding the clarity of learning objectives and assessments was raised by students. Computing Sciences students observed that these had been very clear in previous years, but lately some courses had offered guidance very late or offered minimal guidance. Students studying Stage 3 Mathematics observed that the format of their questions were now based around individual research designed to complement course material with some guidance being clearer than others. Some taught Computing Science post-graduate students found that there were errors in instructions in some assessments and that January and September cohorts would be asked to work on the same coursework with different levels of prior context which seemed inappropriate to the students. However, other students within the disciple had no issues with communications and found that queries were addressed promptly and in a satisfactory way. Some instances were noted where expectations for assessments were vague and the indication of how marks were awarded for formatting and presentation was unclear.

4.4.2. A lack of clarity and variation regarding the release of information and feedback was noted amongst some students with information on exams and assessments appearing unclear.

4.4.3. Some Computer Sciences students perceived that feedback received was of varying quality, with some being excellent and noting other instances where feedback was either not received or was late, inconsistent or with no objectives for improvement. Students in Mathematics reported difficulty receiving feedback at the start of the academic session, however students acknowledged that this course had a largely increased number of students due to the Covid-19 pandemic. Stage 3 Mathematics students confirmed that full solutions were made available, but requests for further explanations of mistakes were refused by a member of staff. A document had been circulated explaining the most common mistakes, but it was felt that this did not meet student expectations for feedback. Students in other disciplines noted that staff had been responsive when asked for clarifications. Students in Physics felt that feedback could be quite basic and would like further detail, but understood the challenges of providing individualised feedback. Feedback received did help inform future assessment. Chemistry students found their level of feedback was satisfactory, but did note some variation in the depth of feedback received. Post-graduate taught students across Computing Science and Maths generally felt satisfied with the feedback given, noting that there was some variance. Post-graduate taught Mathematics students were given individual and general feedback.

4.4.4. Students were asked to consider if the level of assessment set felt appropriate. Maths students noted some concern about over-assessment with a bunching of deadlines due to Covid19 impacting on their ability to balance learning and assessment. Computer Sciences students reported some similar bunching of assessments. Physics students also reported courses following the same assessment plan as a result of Covid19, resulting in bunching of assessment. Taught postgraduate students echoed the view that there was some overassessment particularly early in the Semester, but observed that this had eased off as the session progressed.

4.4.5. The diversity of assessment was generally appropriate. Post-graduate taught Mathematics students found this was a problem early on but was addressed when raised with course coordinators. Computing Science students noted a good mix of assessment types. Physics taught post-graduates felt that there was some inconsistency amongst courses with a heavy emphasis on multiple-choice question papers.

4.4.6. Disciplines varied on the use of discussion boards to capture feedback from students. This practice was used in Computer Sciences, although not at level 3. There was limited use of discussion boards in Chemistry with students preferring to use social media. Mathematics students were unaware of the use of discussion boards.

4.4.7. The students used various methods to provide feedback to staff. Chemistry students used group chats to gather information and pass this forward to staff members who would respond as quickly as possible. In Computer Sciences, student representatives would gather and relay concerns. Mathematics students felt able to raise concerns both in person and online, feeding into staff student liaison committees and providing interim feedback. For the most part, good responses were received from staff, and this provided opportunities for dialogue. Physics students encountered difficulties getting access to class-lists to establish group chats and had to find workarounds to gather student feedback, although students in level 3 of the programme noted that they received good feedback and found staff accommodating. Post-graduate taught Computing Sciences students felt it was clear that previous feedback had been responded to. Postgraduate students were uncertain if all feedback was fully heard but confirmed that opportunities to feedback to staff-student liaison committees were given.

4.4.8. Numbers of direct entry students had been declining, but a cycle of these students not performing well when transferring from college had been observed. There was previously no system for flagging incoming direct entry students, but it was confirmed that this information was provided to retention officers and Directors of Undergraduate Pathways. It was identified where maths skills needed attention, students were given remedial studies, tutorial sessions and the opportunity to audit level 2 courses. It was noted that there were currently no Physics or Chemistry retention officers in place, however it was planned to make all relevant staff aware of where there may be students who require additional support. The idea of providing recorded material to direct entry students was welcomed but found to be difficult in practice. It was noted that the Centre for Academic Development could support the addition of non-registered students on to courses.

4.4.9. There was concern about accessibility for students with poor internet connections if blended-learning were to continue.

4.4.10. Students liked seeing real people on camera where recorded lectures were used and were receptive to office hours being available and advertised, even where these are conducted virtually.

4.4.11. More integration between departments and areas of the School was requested by postgraduate research students to encourage collaboration across disciplines. Students would like to know what is happening in research across the School.

4.5. Theme: Student Achievement

4.5.1. Post-graduate taught Computing Science students had not received specific guidance on careers and employability but did acknowledge that the School has a programme of expert speakers each week. Some elements of study such as the data lab had a notable employability focus and workshops on career skills were available. It was understood that employability opportunities were made available. Information on potential employers was shared by e-mail. It was suggested that these may be better shared by Blackboard due to student preferences. Taught post-graduate

students had a general idea of the services available through the Careers Service while post-graduate research students had noted finding the service helpful. It was not clear to post-graduate students if there was a School careers officer. Further career guidance was requested at the postgraduate taught and research levels.

4.5.2. Post-doctoral students are initially mentored in the laboratory as part of their training. Previously, the most senior students assisted with his, but this was not felt to be ideal due to the time this could take away from the senior student's own research. Compulsory training is conducted by the post-graduate research School and students were aware of further available CPD training. Supervisors encourage further skills development, but typically do not highlight specific courses that are available. Students had been able to identify direction when supervisors are approached. Mathematics researchers noted receiving ethics and cyber-security training. It was unclear to students if subject specific training was available in all instances, but this was supported by supervisors in the case of Physics.

4.5.3. Six-month reviews are supported by supervisors and a weekly check-in system was believed to be in place across all disciplines.

4.6. Pedagogic Partnership Session

4.6.1. The output of the Pedagogic Partnership Session with staff and students (undergraduate and postgraduate) has been included in the above discussion by theme. The feedback gathered at the session has also been included under Appendix A.

PART D: SCHOOL ACTION PLAN

5.1. Review management responsibilities in the School and within the disciplines with a view to reducing replication, allowing for more coordinated work and resulting in a more equitable distribution of workload.

5.2. Review and enhance the way that information is presented to students to ensure there is clarity across courses and programmes; our suggestion is to adopt Organisation Pages within MyAberdeen for locating common policy and practice guidance for UGS, PGTs and PGRs and to adopt a common template for Course pages within MyAberdeen across the School.

5.3. Review the assessment workload for students across courses to achieve greater parity, to increase the consistency in expectations associated with types of assessments within a given programme year, and to reduce over-assessment; our suggestion is to undertake a series of programme reviews using the TESTA (Transforming Experience for Students Through Assessment) model.

5.4. Formalise peer observation of teaching to enable sharing of practice within and across disciplines in the School; peer observation is not meant to serve punitive purposes but rather to encourage dialogue, reflection and learning.

5.5. Ensure that there is support and training available to undergraduates and postgraduates who undertake tutoring, to ensure that it is a valuable experience for the tutors as well as the tutees; we recommend a structure that is light touch but that ensures all tutors can benefit.

APPENDIX A: FEEDBACK FROM PEDAGOGIC PARTNERSHIP SESSION

Undergraduate Group

STUDENTS	What are we doing well?	Responses from Staff
School Structure and Ways of Working	Basic issues (timetabling etc) work well	
Curriculum	-Structure and topics of courses is good (Maths)	
Resources	Online lab sessions in chem are good	Thank-you. This was a completely new concept for us to develop at very short notice
Student Experience		
Student Achievement		

STUDENTS	What can we improve?	Responses from Staff
School Structure and Ways of Working	If there are queries about assignments or specific issues, it isn't clear who to email (and no responses) - Chemistry (not all the time!) Synchronous sessions - confusion as to which are mandatory and not; trying to get information can be difficult - Chemistry When contacted, query moves through several staff (taking several days) before being resolved - Chem	Agree as team taught courses plus year coordinator. In CM level-1 I made this very clear, but (dare I say) some students don't read the course guide or announcements Staff are never quite sure what students see (or don't see) in their timetables I can pass this on to the DUP.

	Schedule of lecture watching is unclear; brought at SSLC but not resolved - Physics Release of information/feedback varies depending on lecturers - no consistency in information about exams and details unclear - computing. No sense of overall structure - no "School" way of doing things - teaching, assessments, ways of interacting or overall management Chemistry is a 12 week course but it seems other courses are 10-11 weeks - should they not be the same?	Not sure which year this is - different in different courses. In Chemistry courses are often taught in specific blocks which fit better into a specific number of weeks, e.g. 1st year if four topic blocks, which it easier to schedule in blended learning over 12 weeks.
Curriculum	-Some assessments didn't cover the entire course (Computing science) - Group work has been difficult, especially when it is online (Computing science) - Course materials and labs are not very well organised, and sometimes they don't match. Course materials were updated but labs were not. - There are some issues with the audio of lectures	Assessment samples the possible material. Some group work is necessary for CS. Not sure which dept
Resources	Mixture of style of resources - some old/recycled and some newly recorded.	Some had to be recycled due to the covid situation and pressure of time, I suspect.
Student Experience	Lack of guidance and support - e.g. reports where the standards are not clear… "Deep breath" to survive semester; Year 3 chemistry	Ask questions as sometimes it is hard to know what is clear and what is not

	Problems with assessments - vague and imparts a sense of increased difficulty because the guidelines are not clear. Some help such as tutorial videos provided to show how to start. Computing What are university grade boundaries A1 = ? etc (Year 1 math)	Often it is because in the "real world" you will be asked to do things with less and less guidance - just like the technical round in Bake-Off. Students often overthink things and make it more complicated than needed.
Student Achievement	Passing due to pandemic means some students feel underprepared in current year Workload and assessments feel very cramped - 8 assessments due in 21 days! In chemistry, one week in December has ~5 assessments due in one week Continuity between years can be seen with some exceptions; but pandemic has interrupted this	Agreed When were these set though? Getting the balance between splitting assessments to avoid high-weighed end of term exams and continuous assessment is tricky. Class reps can bring these things to our attention so deadlines could be reconsidered.

STUDENTS	**What should we stop doing?**	**Responses from Staff**
School Structure and Ways of Working	There are many deadlines for different courses in a week. Students feel very stressed and have no time to study. I hope to spread or extend the exam deadline.(Computer science) Some course assignments have no feedback and students think the results of the grade are low.	This is difficult as almost every student has a different timetable at least in years 1 and 2. This is an issue of adapting to blended learning. I think this is my course! Multiple-choice tests, and students can have feedback, they just

		don't get all the answers given out.
Curriculum		
Resources		
Student Experience		
Student Achievement		

Postgraduate Group

STUDENTS	What are we doing well?	Responses from Staff
School Structure and Ways of Working		
Curriculum	Block teaching - like focus on one course at a time Like building of knowledge through block taught courses (one course builds on the others)	
Resources	Easy to access recorded teaching Library well stocked with journals and books (including ebooks) - easy to use online PRIMO Library was good to provide study spaces	
Student Experience	Application Process easy, both for PGT, PGR	
Student Achievement	9 month and 21 month report system good to have things to work towards in preparation for thesis writing	

STUDENTS	What can we improve?	Responses from Staff
School Structure and Ways of Working	Chemistry - 9 month assessment guidelines for viva and report not available Maths - dead links to documents for PhD guidance (Graduate School perhaps) More integration between departments/areas of the School - more events (make feel more of a School not a group of disciplines) - would like to know what is happening/research across the School (maybe a seminar or gathering or quiz) - could also happen across PGT programmes	Last year we had a get-together event for several of the MSc degrees in the School, we can try to do this kind of events more often.
Curriculum	Block teaching and timetables - no notification of when live sessions will take place (sometimes only appears the weekend before teaching starts)	We can try to improve this and give notification in advance (MSc Data Science).
Resources	Lack of rooms for face-to-face teaching sessions (impromptu talks) Lack of postdoc in lab and staff leaving	
Student Experience	More information on jobs or PhDs - easier to find information More information on what will happen in the final year of PhD (COVID) and expectations on what is required - more reassurance and updates on what is going on	We can do this easily, we can send more information about that. This depends strongly on the funding body; currently being dealt with on an individual basis.
Student Achievement		

STUDENTS	What should we stop doing?	Responses from Staff
School Structure and Ways of Working		
Curriculum		
Resources		
Student Experience		
Student Achievement		

Staff Group

STAFF	What are we doing well?	Responses from Students
School Structure and Ways of Working	Cooperation between disciplines but not over-conformity because we *are* different. Vital role for the admin team	Feeling from PGR/PGT students that this is not the case, but events could help provide more unity (students have event ideas and keen to be involved)
Curriculum	Good degrees, with good professional prospects. Accredited where appropriate	PGR/PGT Don't feel 100% confident about it for now - more signposting to jobs and PhDs (more professional skills training for applying for jobs and PhDs)
Resources	Making the most of what we have, collegiality (but more staff would be nice)	Agree that is a staff member leaves then they should be replaced if they are critical
Student Experience	Friendly and approachable staff	UG Chemistry-very friendly overall. However, sometimes better communication in keeping students up to date is needed,especially when it comes to assessment dates and synchronous sessions- Use of myaberdeen.

		Staff is indeed friendly and approachable. However, sometimes it is hard to get the actual response to a certain problem or issue.
Student Achievement	Good relationship students-staff; good progression; good alumni engagement	

STAFF	**What can we improve?**	**Responses from Students**
School Structure and Ways of Working		
Curriculum	Updating intended learning outcomes and communicating them to students. More variety of assessment. We are learning how to do "blended" and online delivery well.	Students have really stressed they would like this, especially to make clear what is expected to be known before assessments. Students feel stressed and have no time to study when the deadline of assignments is all in the same week. Students feel grades of assignments are too low. Course materials are no links to assignments sometimes.
Resources	CS staff levels were a big problem, but are now starting to recover. Things are still quite tight, especially with a new MSc Cybersecurity starting September 2021. A major ongoing issue is serious lack of investment in lab spaces, equipment, and technicians. HoS is working on these aspects. SMT are aware.	Agree that there is a lack on investment in lab spaces, equipment and technicians as they are vital for some PGT and PGR work, particularly for chemistry.
Student Experience	More consistent experience for students re the personal tutoring system	This has been helpful in using as a guidance for which department to go to for particular concerns.

		PGT personal tutoring/pastoral care doesn't exist - use student reps who will approach staff or AUSA
Student Achievement	Supporting "non-traditional" students in the most effective way	PGT/PGR - Mix of online, part-time and full-time doesn't always work - class size is large - professors struggle with marking, feedback, extensions cannot be given due to another block starting

STAFF	**What should we stop doing?**	**Responses from Students**
School Structure and Ways of Working		
Curriculum	Look at possible over assessment	While dealing with Blended learning please find alternatives to group assessments. PGT - one course underassessed and one group assessment only provides 100% of course mark.
Resources		
Student Experience		
Student Achievement		