

Programmatic Review 2015

School of Science

Date of Review: Tuesday, 05 May, Wednesday 06 May 2015

Recommendations of External Panel and Proposed Actions of School

Recommendation 1	Proposed Action of School
The panel would advise formalising the role of the link lecturer.	<p>The link lecturer role is a feature within the Department of Social Sciences and Design and the Department of Nursing and Healthcare.</p> <p>Lecturers designated as link lecturers the Department of Nursing and Healthcare have a formal role in the setting up and monitoring of placements</p>
Recommendation 2	Proposed Action of School
Explicit recognition of the value of work-based learning is advised with Los advised and explicitly linked to the Los of the programme; they should relate to the overall outcomes of the programme.	This recommendation will be implemented on all new programmes within the Faculty of Science and Health.
Recommendation 3	Proposed Action of School
The school management is invited to reflect on the structures required to achieve a consistent management of placement. The panel recognises that this involves allocation of resources; it feels it is a question worth considering as a quality and consistent placement experience can be a factor that differentiates this school and institute.	One of the strategic goals of AIT's Strategic Plan (2014-2018) was to use the 2015 Programmatic Review as a platform for each school/faculty to develop work-based learning and structured work placements in curricula. Therefore, in the 2015 Programmatic Review, an optional placement module was introduced in any programme within the Faculty of Science and Health that didn't already have a placement. In addition, programmes developed since the 2015 Programmatic Review have a structured work placement built into the programme design (BA in Animation & Illustration, BSc (Hons) in Physical Activity and Health, BSc (Hons) in Microbiology. However, the additional volume of student placement inevitably attracts additional demands on resources to source placement locations and to ensure the quality and consistency of the student placement experience. AIT's Executive Management Team has discussed the establishment of an Institute-wide placement office which would be responsible for the administration of student placement (including Garda Vetting).

Recommendation 4	Proposed Action of School
<p>The research strategy of the school was commended. Concrete metrics should be attached in order that an evaluation can be made. The department of Humanities has little mention within the research strategy; this might be added sensitive to the differing nature and funding streams.</p>	<p>This recommendation was considered by Professor Neil Rowan, Director of the Bioresearch Institute. The following metrics are proposed:</p> <ol style="list-style-type: none"> 1. To continue to building critical mass in existing thematic areas aligned with regional needs and national research priorities to meet the following: <ol style="list-style-type: none"> (a) Increase number of Faculty of Science Staff of time-release for research by 75% by Q1 2016 [already achieved as have gone from 3 to 6] and increase incrementally 25% each year to 2018. (b) Increase postgraduate research enrolments at levels 9 and 10 by 30% by Q4 2018 through sustained and augmented applications to 'President's Seed Fund' Scheme and to various external sources including industry, international, IoTI, Irish Research Council etc. (c) Increase number of projects involving company and clinical engagements by 50% by Q4 2018. 2. BRI steering group to comprise staff-time release and research-active staff from Faculty to comprise at least 50% of membership by Q1 2016 [achieved already for 2015-16 academic year]. 3. To enhanced number of external grant applications to funding bodies from Faculty of Science staff by 100% by Q3 2018 [already achieved for 2015]. 4. To establish academic staff as lead researchers for all specialist domains of interest reporting to BRI Steering Group that encompasses Dean of Faculty of Science and Heads of Departments 5. To appoint visiting research fellow to Faculty of Science and Health in the domain of humanities to facilitate advancement of research areas by Q3 2016 6. To establish new Faculty of Science and Health Research Committee that will facilitate staff interests in undergraduate projects and postgraduate projects (including augmented links to industry such as placements) and postgraduate projects along with

	<p>networking with BRI and other sister research institutes (MRI, SRI), Ethics Committee and so forth by 2016</p> <ol style="list-style-type: none"> 7. Prepare initial research strategic plan (procedural framework) in support of Faculty of Science and Health and AIT process (and aligned with BRI strategic plan) in support and gaining 'delegated authority' to award research degrees at level 9 (MSc by Research level) of the national framework of qualifications in various areas of Health and to gain level 10 (PhD level). 8. To enhance staff publication by 25% each year to 2018 [as important to electronic repository management system implemented to track and share all outputs such as vidatum by 2016]. 9. To enhance international mobility of staff and researchers for training by 50% by Q3 2017. 10. Identify strategic partnerships and networks with benchmarking academic institutes in targeted domains to include appointment of visiting research fellows to AIT from these by Q2 2016. 11. To augment outreach to regional schools that embraces nexus between Faculty staff and BRI researchers by 50% by Q4 2016
Recommendation 5	Proposed Action of School
<p>With regard to the incentivisation of research, the panel advised the school to reflect on this with a view to realising an increased number of research-active staff. The buy-out system requires publicity.</p>	<p>The Office of Research has agreed to set up a system whereby academic staff are notified about the time-release scheme annually in early January with commencement the following September.</p>
Recommendation 6	Proposed Action of School
<p>The school is encouraged to identify research priorities and avoid a scattergun approach. The panel sees potential for cross-disciplinary collaboration and for enhancing external linkages. There is currently a reliance on a small number of active researchers. There might be a planned extension of research by early identification</p>	<p>This recommendation was considered by Professor Neil Rowan, Director of the Bioresearch Institute. The following metrics are proposed:</p> <ol style="list-style-type: none"> 1. For staff to continue and to augment participation in BRI Steering Group and new Faculty of Science and Health Research Committee with view to enhancing established and emerging thematic (priority) research

<p>of students and staff members at early career stage.</p>	<p>areas and clustering of staff in these for advancement.</p> <ol style="list-style-type: none"> 2. To implement and provide sight of activities and outputs through electronic repository system (vidaum) and externally (via webpages – but need ICT administrative support for weekly updates otherwise dated and not accurate). 3. Office of Research to furnish list of internal and external funded research and enterprise initiatives via repository management system when these become available so as to work towards deadlines allowing for other standing commitments. 4. Offer Summer Scholarship Internships to high-calibre undergraduate students in year 3. 5. Where possible and appropriate, align undergraduate projects with existing PG research in priority domains to enhance capacity that will aid continuity, mentoring and critical mass. 6. To provide sight of cross-cutting projects from across Faculty along with inter-research institutional projects to identify opportunities for staff participation and grants (again to be facilitated through institute steering groups along with networking with Faculty Research Committee). 7. To promote cross-cutting inter-disciplinary collaborative projects in emerging opportunistic areas including for example graphics with health sciences, social sciences, ICT (such as apps). 8. To enhance engagement with industries and clinical areas for existing and emerging priority projects. 9. To offer research training module (a kin to teaching and learning) for new and established staff under staff development programme. 10. To encourage and facilitate new lecturing staff to uptake time release and for this cohort to receive mentoring and support via research institutes (including assistance from postdoctoral community), Office of Research and Visiting Research Fellows.
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	<p>11. Run workshops with stakeholders and collaborators in thematic areas along with conferences at AIT (such as Environ17, Ireland-Malaysia 2016 etc.) to enhance cross-collaborative projects.</p> <p>12. To leverage off extensive links in industry and community (HSE such as nursing and social care...TULSA etc.) for external projects as these all fit IRC Employment based projects etc. for priority (high –calibre students – these normally aligned with First Class Honours for award).</p> <p>13. To avail of structured AIT research seminar programme to enhance cross-disciplinary programme that operate bi-weekly.</p> <p>14. Review or externally audit activities across Faculty using visiting research fellows and consultants and BRI networks that will avoid a scattergun approach and identify contingencies for risk management (SWOT model). This will also entail advice on strategic investment for research and connectivity to clinical areas (and clients).</p> <p>15. To exploit TTSI 2 link with Maynooth University to assist staff and researchers with identifying innovation and to help with opportunities.</p>
Recommendation 7	Proposed Action of School
The strong L&T engagement is praised and should be embedded. It encourages the school to ensure that research feeds into undergraduate programmes	This recommendation is welcome and will be implemented.
Recommendation 8	Proposed Action of School
Formalised and consistent contact with industry can feed into the enhancement and currency of programmes. The panel advises the establishment of permanent advisory boards in disciplinary areas where they do not currently exist and where courses are designed to meet particular sectoral needs;	In the case of Nursing programmes, there is ongoing interaction between academic staff and clinical partners (The Local Joint Working Group meets once per semester and the group includes Directors of Nursing from HSE hospitals as well as academic and management staff from the Faculty of Science and Health). In other discipline areas, academic staff are constantly engaged with employers in the course of setting up placements and visiting students while they are on

<p>this is to meet the stated willingness of industry to part-take in such fora.</p>	<p>placement (e.g., Social Care, Early Years Veterinary Nursing). There are obvious advantages associated with the establishment of a permanent advisory board but it may be more advantageous to set up ad-hoc industry advisory boards as and when they are required in order to access the widest range of viewpoints as possible.</p>
<p>Recommendation 9</p>	<p>Proposed Action of School</p>
<p>The sustainability of programmes to be kept under review. While programmes are well designed, in certain cases they may need additional expertise to deliver. The use of contracted staff, adjunct faculty, and guest lecturers is recommended. This can relate to the link with industry.</p>	<p>On Nursing postgraduate courses, paid and unpaid guest lecturers from the HSE and the voluntary sector are invited each year and this practice will continue.</p> <p>On Nursing undergraduate programmes, speakers from the HSE, the medical industry and NGOs in specialist chronic illness areas deliver lectures annually and it is the intention to continue with this practice also as it helps the students link theory with clinical practice.</p> <p>Other guest lecturer have spoken to:</p> <ul style="list-style-type: none"> • Dental Nursing students (TCD Dental Hospital). • Nutrition with Health Science students (Food Industry and HSE). • Pharmacy Technician students (Community Pharmacy Practices). • Audiology students (HSE, private Audiology Practices and Southampton University). <p>Within the Department of Life and Physical Sciences, Ms Susan Neenan and Mr Paul Blunnie both of whom lecture part time on the Pharmaceutical Science and the Biotechnology programmes on industry specific topics.</p> <p>Susan Neenan is in a Senior Director role at Alexion in Monksland. Athlone and Paul Blunnie is a consultant for the Pharmaceutical Sector.</p> <p>Marese Gilhooly is a HSE Chartered Physiotherapist who teaches part time on the BSc (Hons) in Athletic and Rehabilitation Therapy.</p> <p>There is a 4th year subject called Contemporary Issues in Pharmaceutical Science. At least 4 guest speakers visit the Institute each year to speak to students. In 2015, speakers have included Dr Redmond Murphy from Athlone Laboratories, Dr John Lennon from Abbott Diagnostics Division Ireland, and Ms Chrissie Keane from NSAI.</p>

	Guest lectures have always been and continue to be a regular feature of programmes in Social Care, Early Years and Design. In 2015 alone, over 20 guest lecturers delivered lectures or workshops. Student feedback has tended to be extremely positive.
Recommendation 10	
Integration of the Humanities Department: It is accepted that this is a work in progress and that this is not a coherent area currently; in addition, design is somewhat removed and peripheral. Concerning the latter, the staff/student ratio is challenging and is a matter that is sensitive for staff. However, there is a staged willingness to work on this and realise efficiencies. Particular attention should be given to the academic leadership of the programme(s) in design; a champion is required.	The integration of the Department of Humanities (renamed the Department of Social Sciences and Design) into the Faculty of Science and Health has progressed with the input of academic staff from all three departments in the development of a new BSc (Hons) in Physical Activity and Health. In addition, panel approval was obtained in November 2015 to run a new Design programme from September 2016 – the BA (Hons) in Animation and Illustration. Early 2016 will see the commencement of work on an addition Design programme –a BA (Hons) in User Experience. The successful recruitment of students to these two new Design programmes is an important step in building the profile of Design within the Institute and removing the perception that Design is peripheral. Regarding academic leadership of Design programmes, the Faculty will request the filling of the SL1 (Teaching) post, which has been vacant since the previous incumbent took a career break.
Recommendation 11	
Retention: The PASS system is especially valuable and should be embraced more widely and afforded more support.	Agreed. Discussions between Faculty of Science and Health management staff and AIT Student Services are planned (late January 2016) to discuss the possibility of expanding the PASS system into areas in which it currently doesn't operate.
Pastoral care support: The panel recognised good examples of supportive interaction. But this is not often formalised and the school might consider this; for example a shift to a personal tutor system and affording students a named point of reference.	The imposition of the ECF along with the growth in student numbers in the Faculty of Science and Health has meant that academic staff are fully timetabled for front-line teaching in most cases. However, this recommendation is welcome and will be implemented as staffing levels increase.
Recommendation 12	
The Learning to Learn module is commended. An additional degree of tailoring might better link this to other modules and projects; this is to use time to	The Learning and Development for Higher Education module was initially rolled out as a common module in all the AIT first year programs. However it was found that the skills sets for science students were not reflected in the communal

the best and to facilitate the maximum integration within the programme.	<p>module and some of the learning skills required by science students differed from those in other academic areas.</p> <p>There are already links between Learning and Development for Higher Education and other year 1 modules. For example, students use submitted assessments from other modules to increase the understanding of laboratory write ups. Some Science programmes incorporate an Enquiry-Based Learning module in semester 2 of year 1 – this module represents additional opportunities for the integration of first year modules. For the new Physical Activity and Health programme (due to commence in September 2016), the design team have tailored the Learning and Development for Higher Education module so that it integrates core year 1 modules facilitating cross-modular assessments.</p> <p>The Learning and Development for Higher Education module continues to be a mandatory module in semester one of the three first year programmes in Early Years and Social Care. In Design, the ingredients of this module are taught in the Professional Practice stream of modules contained in the BA in Graphic Design and are contained in the new BA (Hons) in Animation & Illustration</p>
Recommendation 13	
The needs of non-traditional students are distinct. The panel encourages the school to consider the implications of such a recognition. And to formalise any supports which are available to this student cohort.	The AIT Disabilities Office registers all students with disabilities and administers all of the supports they require.
Recommendation 14	
Academic Writing and Maths supports: These supports are commended but if resources become available the panel would encourage extension of this support.	This recommended is welcome and will be acted on.
Recommendation 15	
That the number of sports journals available in the library be increased.	The most suitable sports science journal database is one called SportDiscus (with Full Text) which has an annual subscription charge of €6,925 & VAT. This will be an agenda item for discussion with the Vice President for Financial and Corporate Affairs at forthcoming resource meetings (early 2016).

Recommendation 16	
<p>Student Assessment:</p> <p>The school is encouraged to look again at the student workload; there is a requirement for a coordinated review. This should encompass workload and the linkage to reward and credit; it should also take into account timings of assessment and pinch points that might be evident. The panel stressed the importance of adhering to the schedule as published. The assessment handbooks should be kept under review and student feedback sought on structure and implementation. There is a disproportionate allocation of marks in certain areas and the school is encouraged to reflect on this.</p>	<p>This recommendation will be an agenda items for discussion at the semester 2 Programme Board meetings in the 2015-2016 academic year.</p> <p>Within the Department of Social Sciences and Design, a working group is currently reviewing the impact of the revised placement schedule in Social Care (800 hours per programme) on contact hours, volume and type of assessment, and student workload. The plan is to extend this review in 2016 to a broader review of student workload on all Social Sciences and Design programmes.</p>
Recommendation 17	
<p>In relation to assessment instruments and appropriateness, the palette being employed by the school is narrow in some cases and this invites reflection.</p>	<p>This recommendation will be an agenda item for discussion at the semester 2 Programme Board meetings in the 2015-2016 academic year.</p> <p>Within the Department of Social Sciences and Design, there has been a significant swing over the past 5-10 years from terminal examination to Continuous Assessment. As a result, Assessment Matrices for each programme year/semester are completed which summarise the range of assessment methods and the number of assessment components per module. This is used at Programme Boards when considering new proposals to change an existing module assessment strategy.</p>
Recommendation 18	
<p>Student Feedback:</p> <p>The school is encouraged to standardise the student feedback processes and note the timelines involved so that it best serves the needs of learners. The panel emphasised the importance of this recommendation.</p>	<p>This is an important recommendation and it will be an agenda item for discussion at the semester 2 Programme Board meetings in the 2015-2016 academic year.</p>

Recommendation 19	
<p>Internationalisation: The panel advises reflection on the placement opportunities attaching to Erasmus.</p>	<p>This recommendation was discussed with the AIT's Director of International Affairs. Erasmus placement opportunities are contingent on the receipt of sufficient grant funding from the HEA. Mandatory placement elements have always had priority for Erasmus funding. With mandatory placement becoming a feature of Faculty of Science and Health programmes, an increase in the uptake of Erasmus placements is envisaged over the coming years.</p>
Recommendation 20	
<p>The School Strategy over the next 5 years: The panel would recommend a formalised strategic plan for the school. Revisit the willingness to have a mission statement. The school is advised to document where it sees itself in five years' time; such a plan moves beyond new programme provision. Consolidation might be a consideration.</p>	<p>Each of AIT's three Faculties have a Strategic Plan (completed early February 2016) which aligns with the Institute Strategic Plan.</p>
Recommendation 21	
<p>Role of Extern Examiner: While the institute and school processes were acknowledged, the panel encourages consistent and timely feedback to the externs.</p>	<p>The Science and Health Faculty Administrators have devised and implemented a process which provides timely feedback to external examiners. It is being used in the 2015-2016 academic year.</p>
Recommendation 22	
<p>Student Numbers and Recruitment: The panel pointed to potential in respect of graduate studies and expected increased demand in SPAs and L9 programmes. There is additionally some potential for bespoke programmes for industry.</p>	<p>The current focus is on the development of new undergraduate programmes in Animation & Illustration, Microbiology and Physical Activity & Health. Once these programmes are established, programme development will focus on level 9 and SPA programmes (with a view to implementing a blended learning approach).</p>
Recommendation 23	
<p>The school is encouraged toward the greater integration of the class representatives in the course boards. Formalised interactions with the students are advised but look also for other complimentary avenues.</p>	<p>The Faculty of Science and Health Programme Boards include student representation.</p>

Recommendation 24	
<p>The panel noted the comment from humanities on the division of larger classes when encountering group dynamics in social care; the department is encouraged to examine good practice models for the delivery of modules such as group dynamics which are typically conducted with smaller student groups than is the case currently.</p>	<p>The Head of Department of Social Sciences and Design implements this approach across a range of programmes. For example on 10 credit modules (6 hours per week teaching), lectures are encouraged to restrict larger classes to a maximum of 3 hours per week. The larger class is split into three tutorial groups. Students attend one of these tutorial groups. In Design, the same objective is achieved by link lecturers sharing lectures.</p>