SECTION 1

1. Introduction

In November 2023 the University Council approved a proposal "*to establish an advisory group, chaired by the Academic Secretary, with representation from a maximum of 10-12 academic and professional staff across the College, **to scope out how the existing resources** might align to establish a **Learning Lab model** for Trinity and, if the model is approved, to recommend how the Trinity Learning Lab might be operationalised.*"

A Learning Lab Advisory Group was established comprising 12 members from across the academic, student, and professional communities: see *Appendix 1* for Terms of References and Membership. Following consultation with academic and professional staff and students, *Section 2.1*, and informed by previous research[1], *Section 2*, a case for a Learning Lab was developed.

Note: The Advisory Group considered several different titles, see Section 2.4, and settled on "**Learning Innovation & Research Hub**", which replaces "Learning Lab" in this proposal.

1.1   Rationale for a Learning Innovation & Research Hub

There are unprecedented pressures on teaching staff and students from a continual stream of new demands and initiatives from national and international regulatory bodies[2].

Among these are the digital transformation of education; opportunities and risks associated with (generative) AI; increasing availability of learning analytics and, more generally, data analytics; a shift towards different modes of education delivery; increasing focus on student wellbeing; disparities in access to education and the need to respond positively to equality, diversity and inclusion by, among other things, providing flexible learning pathways to cater for diverse learners; increasing student numbers; the emergence of micro-credential courses and new target learners; building upon

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[1] Development of a Centre for Continuous Pedagogical Renewal' Report, October 2020
https://www.tcd.ie/teaching-learning/reports/

[2] Recent new and revised national and EU legislation and policies impacting higher education include, among others: Higher Education Bill 2022: Qualifications and Quality Assurance (Education and Training) Act 2012; National Strategy for Higher Education to 2030; National Framework of Qualifications (NFQ); International Education Mark: Digital Education Action Plan (2021-2027); European Green Deal and Education – to 2050; Inclusive and Equitable Education Initiatives; European Education Area: Directives on the Recognition of Professional Qualifications.

successful pandemic teaching and learning innovations and approaches; the imperative to address climate change and sustainability; increased emphasis on applied learning and graduate employability.

While Trinity's Centre for Academic Practice https://www.tcd.ie/academicpractice/ provides a wide range of valuable professional development for credit and not-for credit courses and resources that support teaching and learning, several current approaches have focused on issue-based initiatives developed in individual Schools or College units, for example, the inclusive curriculum, sustainability, and GenAI uses. New teaching practices arising from such individualised or standalone based initiatives that could greatly enhance the student learning experience are often very difficult to mainstream and embed across Schools. Because of the lack of resources and a College Learning Strategy, these initiatives suffer from not having the range of expertise required to adequately tackle the problems of integrating and mainstreaming successful initiative outcomes. Subsequently, pilot teaching projects, while reasonably successful in a particular context or environment, require major revision and redesign, and can incur significant integration costs to mainstream or make more widely available. The opportunity is lost to leverage or empower the broader academic and infrastructure communities to achieve sustainable college wide impact and benefit.

1.2 Why a Learning Innovation & Research Hub?

This proposal seeks to provide a focus for Teaching & Learning Innovation where College expertise can be aggregated and harnessed to better devise and/or adopt proven teaching innovations, conduct pedagogic research, pilot, and where appropriate, mainstream new developments in curriculum design, teaching practices, learning, and assessment, and to support the application of new and emerging learning technologies.

It is proposed that a Learning Innovation Research Hub be established as a first step towards a fully operationalised unit. At this stage we are interested in conducting a feasibility study that will help us define a structure that empowers Trinity College academic staff, teaching and learning support staff, and students to respond to educational challenges by (co)researching pedagogical and digital learning innovations, evaluating and, as appropriate, integrating successful innovations within Trinity College curricula.

The Lab will:

    i.   act as a lightning rod for drawing together academics and teaching and learning professional staff, and will be an appropriate infrastructure to enable sustainable development and evaluation, and where appropriate, the mainstreaming of new/revised teaching practices that enhance curricula, learning, and assessment;
    ii. provide a collective means of encouraging and supporting academics and schools to tackle the growing pressures of curriculum enhancement whilst ensuring the learnings and practices from this engagement can be mainstreamed across college curricula and embedded more effectively and efficiently;
    iii. offer a shared expertise, space, and resources for academics and professional staff to develop, execute and evaluate the mainstreaming of high value pedagogic and technological innovations;
    iv. provide a shared space and resources for researching problems and solutions for enhancement of teaching and learning at 3rd and 4th level education;

v. support School and College leadership teams with trusted, validated, and informed foresight to enable strategic development of teaching, learning, and assessment at Trinity College.

1.3 Existing Teaching and Learning Services

The remit of the Advisory Group was **"to scope out how the existing resources might align to establish a Learning Lab model for Trinity…"**

There are a range of resources and supports for and activities related to teaching and learning at Trinity. The Centre for Academic Practice has an exclusive teaching and learning role, while others, such as IT Services, have dedicated teaching and learning units; and still others have a limited and more specialist role, such as the Data Protection Office and the Quality Office. A few schools, such as the School of Nursing and Midwifery and the School of Medicine, have dedicated education and development staff, and staff across other schools experiment with novel approaches to teaching and learning. The School of Education is a site of extensive research and professional development expertise across a range of areas for learning and for learning that is life-long and life-wide, and this expertise will be a valuable resource to utilise.

Figure 1 below provides an overview of existing teaching and learning services, not including those in schools, that support the staff and/or student education journey.

Figure 1 Trinity Teaching and Learning divisions

Trinity Teaching and Learning divisions	Remit Overview
Academic Affairs	• Responsible for supporting academic policy development, regulations, and standards. • Administrative support and guidance to academic staff on developing new course proposals and approvals, and national and transnational collaborative programme and awards. • Supporting academic governance and the academic officers
Academic Practice (formerly CAPSL)	• Provides professional development support, resources, and discussion fora for academic staff and staff supporting teaching and learning via research-led programmes, workshops, consultancies, and events. • Facilitates opportunities for colleagues to advance their practice in teaching, learning, and assessment.
Careers and Development Service	• Supports student/ graduate careers and enhancing employability. • Develops guidance and works with academics across disciplines to embed employability and employer input into the curriculum. • Engages with employers in terms of placements and work-based learning opportunities and links academics with employers. • Oversees co-curricular activities related to careers and employability – employability award and leadership and development scholarships. • Supports the development of micro-credentials.
Quality Office	• Ensures Trinity is aligned to standards and regulations for quality, and that this is embedded in institutional culture and behaviours.

Trinity Teaching and Learning divisions	Remit Overview
	• Includes offering on quality assurance tools, procedures, advice, and information to schools.
Trinity Access Programmes	• Supports people from areas with low progression rates to higher education to reach their full educational potential. • Offers a range of access programmes and engagement with communities and schools – good practice in terms of pedagogy and teaching and learning.

Other professional development units and staff provide support for aspects of teaching, learning and the student experience, but this support is not connected at present. Some of the development units listed in Figure 2 below may have an interest in and, in some cases potentially a role to play, in the work of a Learning Innovation & Research Hub.

Figure 1 cont. – Related development units and remits

Development unit	Remit
Disability Services	• Provides supports to disabled students and staff, recommends policy changes, and ensures compliance with relevant legislation and codes of practice. • Also works with EDI on inclusive teaching and contributes to the development of the Academic Practice course Learning to Learn Online.
CHARM-EU	• Offers a transformative, educational approach to programme and curricula design, and a flexible, skill-oriented modularised course structure. • Designs challenge-driven curricula that is student-centred, with self-directed teaching that integrates research, teaching, innovation, and enquiry within and across the disciplines.
Inclusive Curriculum - Equality, Diversity & Inclusion (EDI) and the	• Supports students with their learning and study skills, liaises with academic staff and holds workshops, and works with other professional units, TAP, Global Relations, and Academic Practice.
Global	• Responsible for brokering international collaborations e.g. jointly delivered programmes, therefore requires knowledge of the overall curriculum and teaching practices to be able to identify appropriate potential partners.
IT Services: Teaching & Learning Unit including the IT Digital Learning & Development Team	• Engages with eLearning and provides expert support on instructional design of online courses. • Responsible for managing and providing support on VLEs and tools (BlackBoard, Collaborate, Panopto); managing some facilities and teaching spaces (IT & AV).

Development unit	Remit
	• Inputs to Special Purpose Certificate in collaboration with Academic Practice.
Learnovate	• One of ten tech centres funded by Enterprise Ireland. Learnovate supports and enables organisations unlock the transformative power of learning using applied research, innovative practices and cutting-edge technology. (*Huge scope given the expertise in Learnovate to work with the Learning Innovation & Research Hub in leveraging power of innovative thinking*.)
Library	• Provides support and training across a wide range of areas for staff and students. • Subject librarians design and deliver information and digital literacy skills and embed them into the curriculum where possible.
Student Learning and Development	• Supports students by helping them develop the skills needed to become independent learners and reach their academic potential. • Offers workshops and skills events and learning resources.
Martin Naughton E3 Learning Foundry	• E3 is 'balanced solutions for a better world'. E3 will be a crucial component in our transition to a 'smarter' economy, developing technological solutions that are more sustainable and more equitable in the use of the earth's limited natural resources. Conceived as a "living lab" where students can conduct experiments involving energy, acoustics, air quality etc.
Portal (formally Tangent)	• Portal is the gateway for partnering and co-location with world class researchers, new talent, innovators, and entrepreneurs. • Tackles challenges of the future through research collaborations, licensing opportunities, professional consulting, education, executive training, and entrepreneurship programmes.

1.3.i   Maximising the impact of existing teaching and learning resources to further enhance teaching and learning.

The Centre for Academic Practice, https://www.tcd.ie/academicpractice/ , provides a range of professional development courses and teaching and learning resources to support and enhance teaching and learning across the university, however, the Centre does not currently have the capacity to support a Learning Innovation & Research Hub feasibility study. There is limited capacity and expertise currently to foster experimentation, research, and innovation in pedagogy and curriculum design. The Learning Innovation & Research Hub is envisaged as a space where academics can draw on existing Trinity College resources to collaborate with subject and professional experts and services, conduct pedagogic research in their subject area, and experiment with the application of current and/or known technologies in a supported environment. Recognising the limitations of

existing resources, the Advisory Group recommends the establishment of a Learning Innovation & Research Hub as a feasibility study that tests the viability of this concept as a first step in the creation of a fully operationalised Learning Innovation & Research Hub at Trinity College.

Figure 3 illustrates the relationship between existing resources and a Learning Innovation & Research Hub.

The Learning Innovation & Research Hub, with a primary focus on experimentation and research, will be closely aligned with the Centre for Academic Practice and will draw heavily from the pedagogical expertise available in the Centre. Reliance on other teaching and learning services is determined by the nature of the project under investigation – see Figures 4,5,6 and 7 below.

Figure 3 – Existing teaching and learning resources and their relationship to the Learning Innovation & Research Hub.

The proximity of each service to the inner circle suggests the level of dependency on available resources to support a project in development. IT Services supports the IT and digital infrastructure required for teaching and learning.
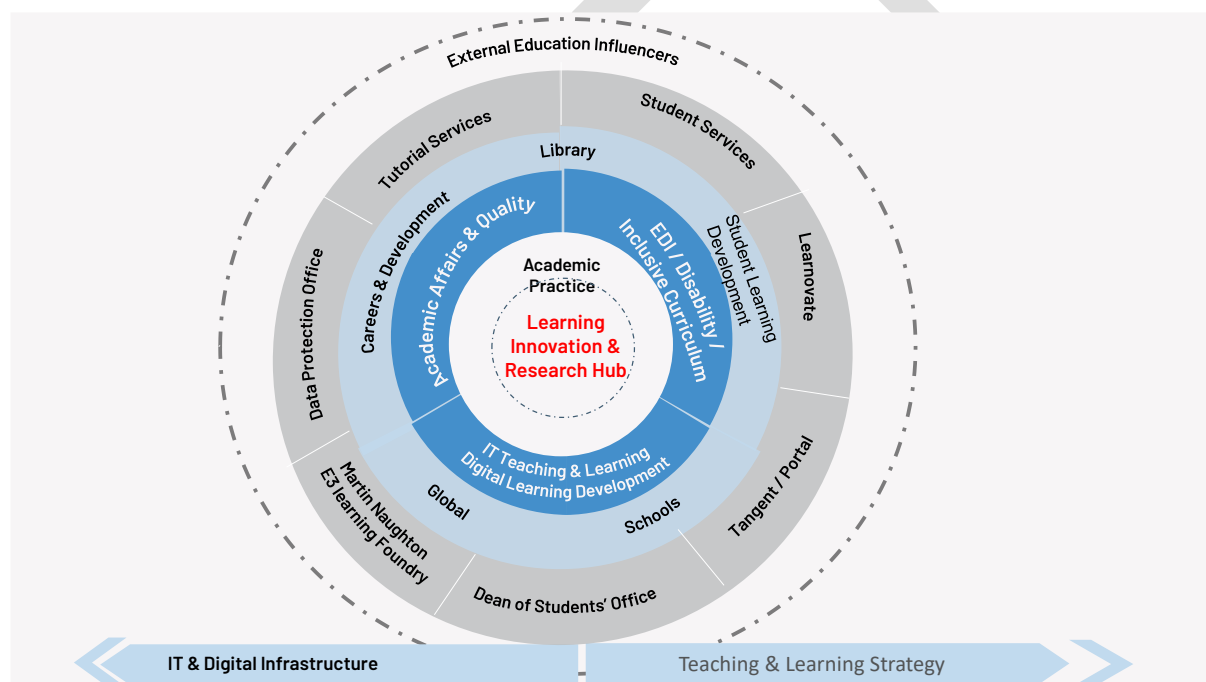
In assessing how existing resources and communities could engage with the Learning Innovation & Research Hub, the following roles were identified:

(i)   **Proposer:** generates and experiments with novel concepts that may lead to significant advancements in teaching, learning, assessment, and research.

(ii)   **Collaborator**: in the context of partnering with colleagues to create innovative and sustainable approaches to teaching, learning, and assessment.

(iii)   **Advisor**: provides guidance and recommendations based on their subject and/or professional expertise.

(iv)   **Enabler:** provides the necessary supports to enable and/or facilitate innovation and embed outcomes in teaching, learning and assessment approaches.

See Figures 4, 5, 6, and 7 below for worked examples.

1.4   Recommendations

The resource requirements of the Learning Innovation & Research Hub will be developed if Council approves the proposal to progress to the 'operationalisation' stage.

The Centre for Academic Practice plays a key role in enabling staff further develop their teaching, learning and assessment approaches and this expertise along with a coordinated structure of other required services is essential to the continuous development of teaching and learning at Trinity.

To initiate the establishment of a Learning Innovation & Research Hub as a first step towards a fully operationalised Hub, the following steps are recommended:

1. Approve the establishment of a Learning Innovation and Research Hub feasibility project.
2. Appoint the Senior Lecturer, Professor Wade, as the senior academic with expertise in pedagogical innovation to provide academic oversight.
3. Establish a Teaching and Learning Advisory Group[3], chaired by the Senior Lecturer and with undergraduate and postgraduate student[4], academic and professional staff representation, to establish the remit, define specific needs, resources, and risks, and to oversee the set-up and operations of the Learning Innovation & Research Hub including the identification of appropriate space and core technologies.
4. Appoint an academic to provide leadership in the coordination of the Lab's remit.
5. Commence discussions on harnessing the expertise of existing teaching and learning services to support the establishment and operations of the Hub and identify capacity and gaps.
6. Assign Trinity Teaching and Learning staff to support the work of the Advisory Group and to project manage the initiative.
7. Assign Strategic Alignment of Teaching and Learning Enhancement (SATLE) funding to seed fund projects and core additional staffing resources in research, pedagogy, and digital expertise.
8. Evaluate the initiative after two years of operations to determine the future direction of a Learning Innovation & Research Hub at Trinity College Dublin.
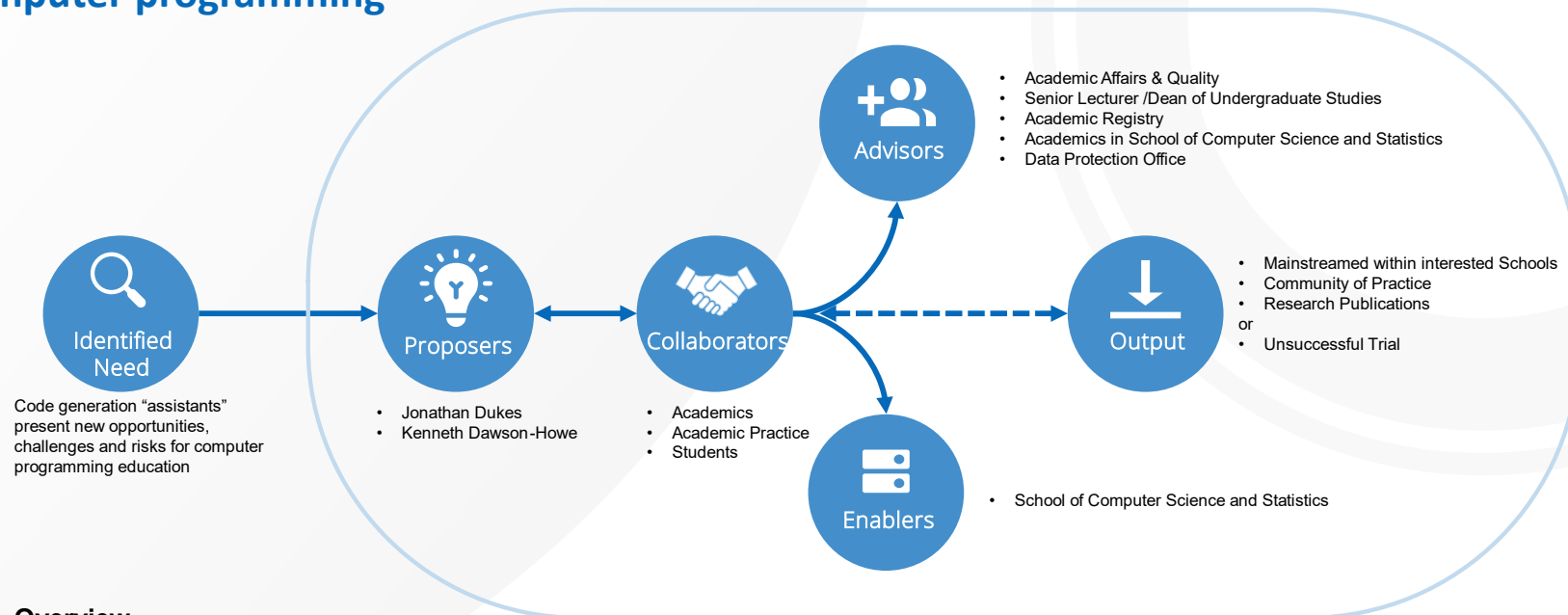
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[3] The Teaching and Learning Advisory Committee will have academic representation from each of the faculties to ensure that different pedagogic needs of specific disciplines are met.
[4] The different postgraduate student cohorts should be accommodated.

DRAFT

Figure 4

Exploring the introduction of generative AI in early stage computer programming

Identified Need

Code generation "assistants" present new opportunities, challenges and risks for computer programming education

Proposers
- Jonathan Dukes
- Kenneth Dawson-Howe

Collaborators
- Academics
- Academic Practice
- Students

Advisors
- Academic Affairs & Quality
- Senior Lecturer /Dean of Undergraduate Studies
- Academic Registry
- Academics in School of Computer Science and Statistics
- Data Protection Office

Enablers
- School of Computer Science and Statistics

Output
- Mainstreamed within interested Schools
- Community of Practice
- Research Publications
or
- Unsuccessful Trial

Overview

This project will provide an authentic setting within which we can explore the introduction of generative AI coding assistants in early-stage computer programming education. The project will offer students in Year 1 Computer Science an optional, extra-curricular module (approximately 1 credit/25 hours of student input) introduction to programming with AI coding assistants, running in parallel with existing core curriculum modules. It is expected that the results from the project will inform the development of core programming modules.
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Figure 5

Using real-time data generation in the physiology teaching lab to improve research skills in undergraduate students

Identified Need

To embed a stronger element of research and research analysis into the early years of the curriculum

Proposers
- Aine Kelly

Collaborators
- Academics
- Students

Advisors
- Academics in School of Computer Science and Statistics
- Data Protection Office

Enablers
- School of Medicine

Output
- Mainstreamed within interested Schools
- Community of Practice
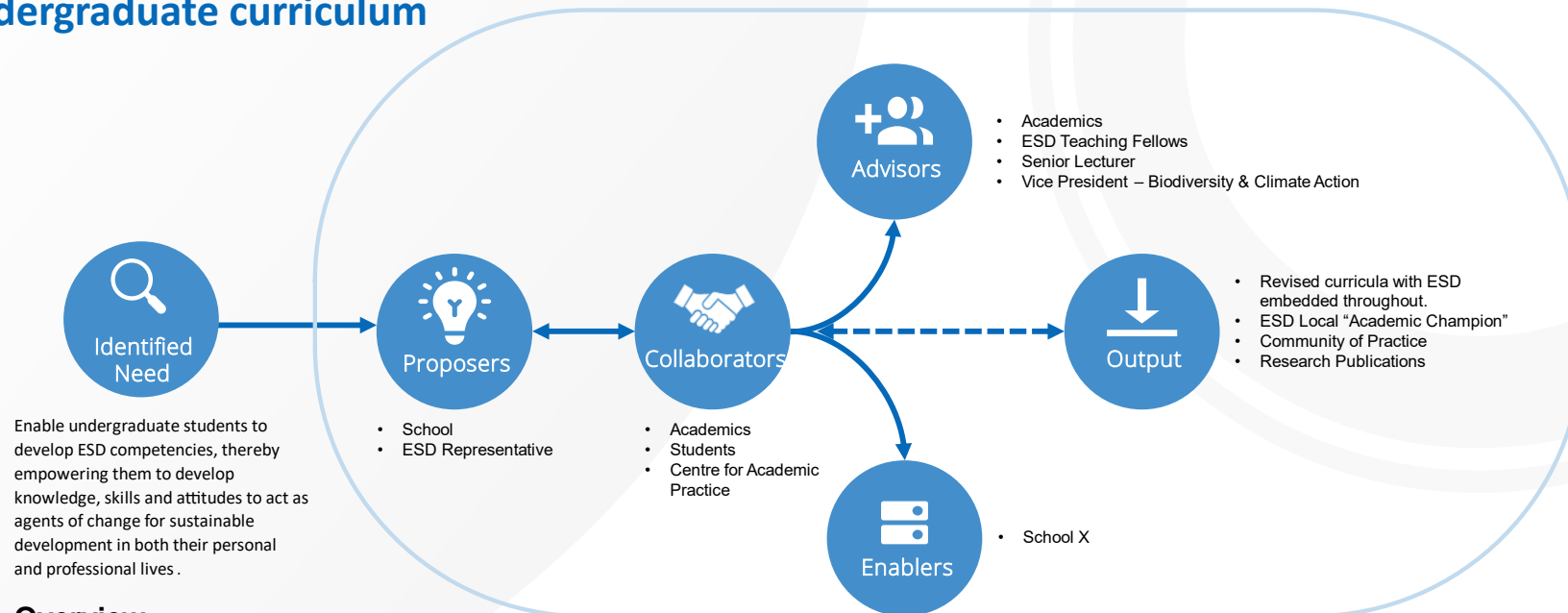- Research Publications

or
- Unsuccessful Trial

Overview

As the School of Medicine is undergoing a process to reform the curriculum of the medical degree, it seeks to embed a stronger element of research into the early years of the curriculum. Enhancing the data handling and statistical analysis aspects of a laboratory class would seem to be an efficient and student-centred way to strengthen basic research skill. These activities would reinforce the concept of physiological variation across a subject group and introduce basic concepts in data analysis and statistics in the early weeks of the first semester. AN associated benefit would be to boost active learning and enhance student engagement. In this project, we would explore ways to expedite dataset construction and analysis, using AI or commercially availa

Figure 6

Enable the development of student ESD competencies in the undergraduate curriculum

Identified Need

Enable undergraduate students to develop ESD competencies, thereby empowering them to develop knowledge, skills and attitudes to act as agents of change for sustainable development in both their personal and professional lives .

Proposers
- School
- ESD Representative

Collaborators
- Academics
- Students
- Centre for Academic Practice

Advisors
- Academics
- ESD Teaching Fellows
- Senior Lecturer
- Vice President – Biodiversity & Climate Action

Enablers
- School X

Output
- Revised curricula with ESD embedded throughout.
- ESD Local "Academic Champion"
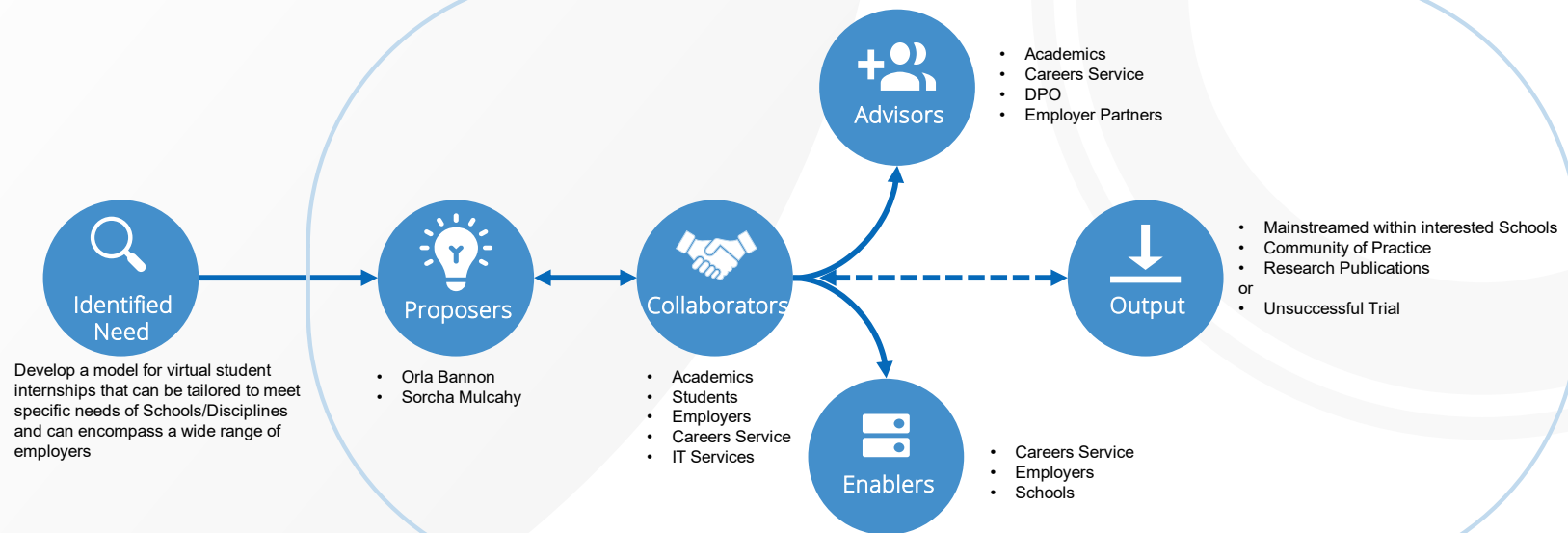- Community of Practice
- Research Publications

Overview

In response to international, national and institutional imperatives and strategic priorities, it is necessary to embed education for sustainable development (ESD) within undergraduate programmes through transformative, action-oriented pedagogical approaches along with integration of relevant sustainability content. Building on work undertaken in Trinity to date and elsewhere, the objective is to revise and redesign the programme curricula to enable learners develop the ESD competencies (as defined by UNESCO 2017) which include anticipatory, normative, strategic, collaborative and critical thinking competencies, self-awareness, integrated problem solving and systems thinking. It is expected that the results of this project will support other educators and programme leaders across disciplines to consider how they might embed ESD into their curricula.

Figure 7

Developing a flexible model for virtual student internships with employers

Identified Need

Develop a model for virtual student internships that can be tailored to meet specific needs of Schools/Disciplines and can encompass a wide range of employers

Proposers
- Orla Bannon
- Sorcha Mulcahy

Collaborators
- Academics
- Students
- Employers
- Careers Service
- IT Services

Advisors
- Academics
- Careers Service
- DPO
- Employer Partners

Enablers
- Careers Service
- Employers
- Schools

Output
- Mainstreamed within interested Schools
- Community of Practice
- Research Publications

or

- Unsuccessful Trial

Overview

During the pandemic, it became necessary to rapidly move accredited student internships online to enable students to continue their learning and meet the required components of their programmes . Much of this was done on an ad hoc basis with success dependent on the circumstances and capabilities of both the student, the employer, and the university . However, it did show that virtual student internships could work if constructed, managed, and assessed in the right way and were sufficiently flexible and robust to meet the learning requirements and needs of all involved . Building on learning to date across Trinity and elsewhere, this project, led by the Careers Service, sets out to develop a model for virtual student internships with employers that can be tailored to meet the specific needs of Schools/Disciplines, meets curriculum requirements, and involves a wide range of employers, both national and international .

Section 2

2.1 Consultation

The Academic Secretary, supported by the then TT&L Administrator, Cathal Clancy, consulted a wide range of staff from across 16 departments between December 2023 and April 2024. The purpose of these meetings was to gain an understanding of the resources available in each department and how these resources could be used in collaboration to enhance, support, and/or advise the work of a Learning Innovation & Research Hub. Further consultations were held with students and providers of teaching and learning on foot of the Advisory Group's first Learning Innovation & Research Hub draft proposal. A second draft proposal was prepared following these consultations and was presented for input to the Undergraduate Studies Committee and the Graduate Studies Committee at their meetings in May 2024. Feedback from this consultative engagement was considered by the Advisory Group and the draft proposal amended to reflect, where relevant, the committees' feedback.

During the preparatory stages to inform the work of the Advisory Group, staff across a range of support and professional areas were consulted to ascertain what if anything they might contribute to the work of the Learning Innovation & Research Hub. There was a high degree of enthusiasm for the development of a Learning Innovation & Research Hub that would be a centre for pedagogical excellence. Several interviewees spoke about the need for a student portal and a staff portal to assist students and staff navigate the learning journey.   As a result, almost all areas consulted stressed the need for ease of access to and better visibility of the range of teaching and learning resources available across the college. These needs are being considered as part of the Digital Transformation Programme, the renewal of the VLE, and the PG Renewal Programme

2.3 SUMS Report and Recommendations

The SUMS report and recommendations, "*Development of a 'Centre for Continuous Pedagogical Renewal' Report, October 2020"*, see https://www.tcd.ie/teaching-learning/reports/, were considered by the Learning Innovation & Research Hub Advisory Group, and were circulated to all consultees to inform discussions. The report was found to be insightful and relevant but scant in reference to digital and technology, which have come to the fore in the delivery of education since the Covid pandemic.

The vision at the time of commissioning SUMS was to create a focal point of expertise where academic and professional staff can come together to experiment and contribute to enhancing teaching and learning practices. The SUMS research involved comparative international research to explore different models and identify effective practice which Trinity may wish to consider; and an internal consultation with circa 90 academic leaders, staff, and students to elicit their ideas and views.

In summary, SUMS research found that while all the comparators have an identified teaching and learning unit or centre, there are different models for their position within the overall university and for the scope of their responsibilities and scale of resources (ranging in size from 15-45 staff). "The remit of the centres includes providing research-informed professional development (for staff and in some cases also students), curriculum design support, programme evaluation, conducting or commissioning pedagogic research, facilitating networks and communities of practice, engaging with

students and external stakeholders, including employers, and contributing to institutional strategic learning and teaching initiatives" (p.3).

SUMS reported that Trinity consultees defined four key objectives for a Curriculum Hub (Learning Innovation & Research Hub) as:

i. "To influence and provide guidance on curriculum development and pedagogy in alignment with Trinity strategy and Government priorities.

ii. To promote and support a culture that values effective teaching.

iii. To enhance the student experience, and support diversity and equality in all its forms.

iv. To strengthen and connect existing internal sources of expertise and enable more holistic support for academics in developing the curriculum and their pedagogic practice" (p.22).

2.3 SUMS Recommendations

SUMS presented a three-stage process that might deliver strategic objectives on enhancing curriculum design and pedagogy. The 'ideal operating model' proposed by SUMS is the establishment of a:

"New academically led designated unit with articulated mission and objectives connected to Trinity's Strategic plan and priorities, drawing together existing support with substantial new research-informed services and support (including discipline specific) and at greater scale. Includes use of secondments (academic staff to the Hub and professional staff rotating and or embedded to support schools) and engages with and provides direct support to students to ensure the best possible learning experience. (It) Either leads or contributes to institutional strategic learning and teaching enhancement initiatives, including support for research-led pedagogy and curriculum development" (pp.4&5).
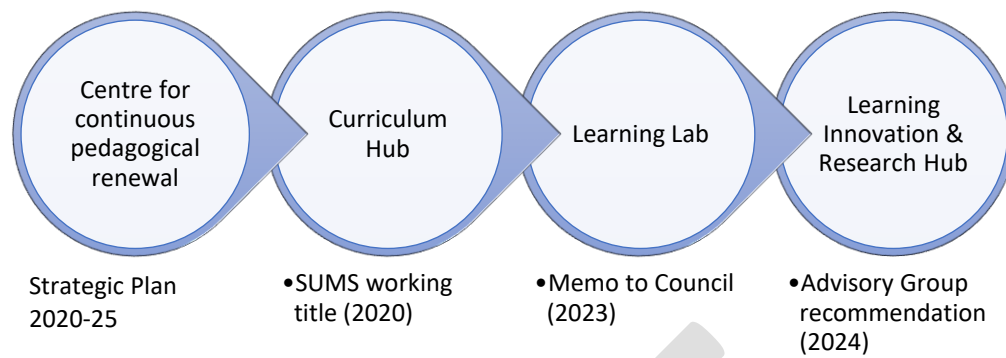
SUMS' over-arching recommendation is that *"…Trinity works towards the adoption of the full ideal operating model in order to secure the greatest benefits and emulate the most effective practice identified by the research…"* (p.5).

Being mindful of the remit of the Advisory Group to *"to scope out how the existing resources might align to establish a Learning Lab model for Trinity…"*the Advisory Group agrees with SUMS that a stepped approach to achieving such a unit is necessary.

The full report "*Development of a Centre for Continuous Pedagogical Renewal*" can be accessed at: https://www.tcd.ie/teaching-learning/reports/

2.4 Title

Centre for continuous pedagogical renewal	Curriculum Hub	Learning Lab	Learning Innovation & Research Hub
Strategic Plan 2020-25	•SUMS working title (2020)	•Memo to Council (2023)	•Advisory Group recommendation (2024)

Appendix 1

Terms of Reference:
"To scope out how the existing resources might align to establish a Learning Lab model for Trinity and, if the model is approved, to recommend how the Trinity Learning Lab might be operationalised."

Membership

Name	Title
Patricia Callaghan	Academic Secretary & Chair
Aine Kelly	Professor in Physiology
Vincent Wade	Professor of Computer Science
Ann Devitt	Associate Professor Education
Jonathan Dukes	Assistant Professor in Computer Science
Colin McCabe	Teaching & Learning IT Manager
Deirdre Green	Programme Manager Learnovate
Siobhan Dunne	Head of Teaching, Research, and User Experience in Library
Pauline Rooney	Head of Academic Practice
Liz Donnellan	Education Policy Developer
Orla Bannon	Director of Careers & Development
Olivia Orr	TCD Students' Union Entertainments Officer
Eoghan Gilroy	AHSS Faculty Convenor
Ruaidhrí Saulnier	STEM Faculty Convenor
Catherine Arnold	TCDSU Education Officer (first two meetings)
Cathal Clancy	Teaching & Learning Administrative Officer (Secretary)

* Geoff Bradley, Head of Academics Services, Innovation, & IT Services, attended the first meeting.