

Student-staff Partnership Overcomes Pandemic Challenges in Research: Establishment of a Remote Research Programme.

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Abstract.

In light of the unfortunate circumstances of the COVID-19 pandemic, the RCSI University of Medicine and Health Sciences highly successful Research Summer School 2020 was cancelled to adhere to public health guidelines. This cancellation of the Summer School, while unavoidable in light of the impact of the pandemic, was nevertheless a significant setback for undergraduate students wishing to pursue research.

The RCSI Research Skills Society (RSS) took the initiative to create, develop and launch a Remote Research Programme that would enlist principal investigators (PIs) with available projects and students interested in contributing to these projects remotely. The application process and selection criteria were deliberated to ensure a fair, blinded, and robust selection process. Applicants had the opportunity to read project descriptions before applying with their curriculum vitae (CV) via Google Forms. After setting the limit at 120 applications, all applicant slots were filled within two minutes of opening the application portal. The successful partnership between PIs and student research assistants resulted in 25 PIs enlisting 30 projects, with 45 successful applicants matched to these projects. Many of these projects were successfully published in academic journals such as The Journal for Wound Care, BMC Proceedings, and Journal of Personalised Medicine.

A combination of students' active engagement, co-creation of partnerships with PIs, and the support of key partners within the RCSI community were responsible for allowing the programme to be highly successful. The success of this project may have implications for the future in continuing to foster other

remote research programmes to take place in order to increase accessibility to research projects.

Keywords: Collaboration; Innovation; International; Networking; Research; Student engagement; Student partnership.

1. Introduction.

The year 2020 was a particularly profound time for all with the rapid onset of COVID-19. In institutions across the globe, students and staff were adversely affected in various ways. As just one example, in the summer of 2020, our university, RCSI University of Medicine and Health Sciences, made the tough decision to cancel the RCSI Research Summer School for undergraduate students given that there was no or only limited physical access to the research laboratories during this time. This Summer School, which has been running annually since 2010, provides unique research opportunities for students to work full-time over eight-weeks during the summer months with principal investigators (PIs) on key projects, many of which have resulted in joint publications. The cancellation of the School, whilst unavoidable in light of the impact of the pandemic, was nevertheless a significant knock for undergraduate students wishing to pursue research.

Having just been elected as the new incoming RCSI Research Skills Society President in May of 2020, I, together with my new team, were eager to overcome this barrier. We suggested that RCSI consider developing a remote summer research programme for undergraduate students. The programme would be designed to connect student researchers across all undergraduate and graduate entry programmes (School of Medicine, School of Pharmacy and Biomolecular Sciences and School of Physiotherapy) and across our RCSI campuses (Dublin, Bahrain, and Penang) with PIs who had ongoing research projects that could be accessed and implemented remotely. In the past, many institutions had only conducted research projects in person, but the pandemic demanded the creation of a novel approach to research (Tripepi & Landburg, 2021; Keenoy, Lenze & Nicol, 2021). Research in transformative learning theory indicates that adult learners regularly use new information to reinterpret old experiences and examine these experiences through newfound perspectives (Meizrow, 2018). Consequently, we sought to establish online research projects as a way to supplement and augment the learning experiences of in-person research, which many of our students previously have had and which will inevitably return after the pandemic subsides (Chytas,

Salmas & Troupis, 2021).

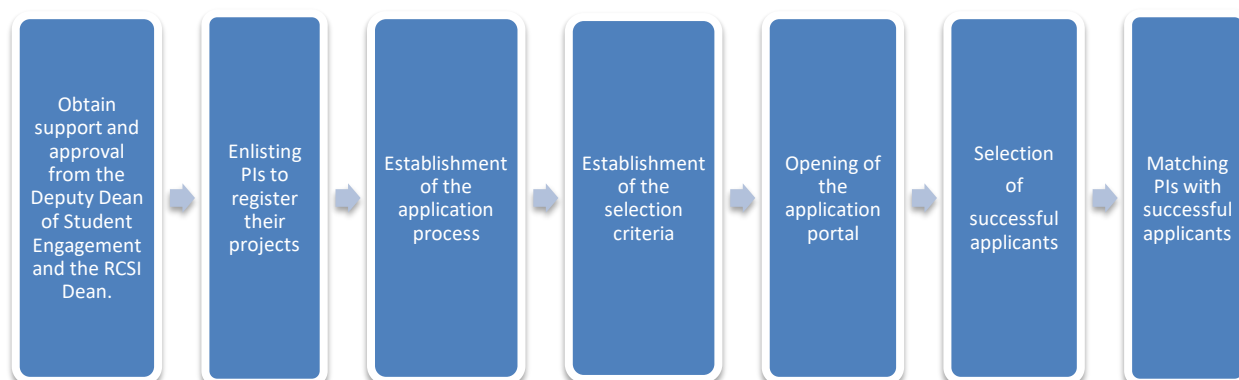
Given that we would require extensive connections within RCSI faculty, we knew we could not embark on this project independently. To complete this task, we worked in close partnership with key staff, including the Dean of the Faculty of Medicine and Health Sciences, the Deputy Dean for Student Engagement, staff from our Student Services Department, the Deputy Head of the Research Summer School, and Estates and Support Services. The support received was tremendous and impactful.

2. Creation and Establishment of the Programme.

2.1 Programme Approval and Project Enlistment.

Our first step was to gain support and insights from the Deputy Dean for Student Engagement at RCSI, whom we subsequently recruited as Faculty President of our Society (Figure 1). This would prove to be monumentally vital to our image and representation of our project to senior staff at RCSI. Once the project received approval from the Dean and senior faculty, it was time to reach out to RCSI PIs. Once again, we relied heavily on our Faculty Society President to communicate with her colleagues and to help us navigate the correct research channels to promote our call for PIs to submit projects at our university. In just one week, we had 25 PIs sign up and 30 research projects registered for our remote summer research programme 2020.

Figure 1: An overview of the student-staff partnership process in the establishment of a Remote Research Programme.



2.2 Establishment of Application Process and Selection Criteria.

Next, our Society extensively deliberated how to implement a fair, blinded, and robust application process to recruit students onto these projects. We would often seek advice from the Student Services team, who are experts in aiding students in launching initiatives and seeing them through to successful completion. After finalising the application process, the selection criteria were next to be established. The applications were to be assessed by the Executive Committee members of the Society (President and two Vice-Presidents) based on specific criteria. To establish the criteria, the Executive Committee met and decided on a criteria that could be standardised and implemented by all reviewers with minimal discrepancies in assessment. These robust criteria included three categories with a set of questions that helped guide assessors in marking the CVs (Table 1). We proceeded to advertise the newly developed programme to students. This required extensive collaborations again with Student Services and the Students' Union for adequate social media outreach. We were thrilled to garner such excellent student interest. On the foot of this, we planned for an extensive, elaborate, open and transparent application process. Once the application process and selection criteria were finalised, we proceeded to the implementation phase and launch of the programme.

Table 1. Criteria and Examples for Assessment of Applicant Applications

<p><i>Meeting the skills required by PI (3 points)</i></p> <ul style="list-style-type: none"> • If PI requests specific skills such as qualitative statistical analysis, data interpretation, or general previous research experience, this must be demonstrated on the applicant's CV.
<p><i>Grade(s) (1 point)</i></p> <ul style="list-style-type: none"> • It is optional for students to add their grades to the CV; however, if present and they displayed an honours student, this worked in their favour.
<p><i>Dedication (3 points)</i></p> <ul style="list-style-type: none"> • Students who showed dedication and commitment to extracurricular or volunteer activities; activities did not have to be research-related.
<p><i>Overall achievements of CV (3 points)</i></p> <ul style="list-style-type: none"> • The reviewers' general impression of the applicant following review of their CV and assessment of the applicant's compatibility with the PI/project.

2.3 Programme Launch and PI/Applicant Match.

Once we opened our portal to accept applications, our 120 student limit was reached within two minutes. We were particularly pleased to see interest from students from our international campuses at RCSI Bahrain and RCSI UCD Malaysia Campus (RUMU; formerly Penang Medical College). Our team successfully shortlisted a minimum of three candidates for each PI to review. Ultimately, the shortlist of three candidates and their applications were sent to the PI for review. The PI then informed us of the successful candidates, and the Society communicated to the successful and unsuccessful candidates the outcome of their application. Students and PIs subsequently embarked on their research projects for the remainder of the summer. Students gained invaluable research experience and enhanced their professional and networking profiles. Several students are currently in the publishing process with academic journals (such as the Journal for Wound Care, BMC Proceedings, Journal of Personalised Medicine), meanwhile other students are developing new projects with the same PIs they previously collaborated with. After the programme duration of eight weeks came to an end, we reported the results of the programme to the Dean and Faculty President who were both delighted with its success. The PIs not only successfully mentored and supervised students but also benefited from the tangible support they received from the students who contributed to their project outputs.

3. Conclusion.

In summary, at the height of a global pandemic, our Society made an invaluable contribution to the overall RCSI student experience. We sustained our mission, commitment, and passion for providing undergraduate students with invaluable research opportunities through this initiative. This initiative would not have been possible without the unsurmountable support and partnership with key faculty at our university. Thus, we have learned we can have significantly more impact and a more effective outreach through meaningful staff-student partnerships and that both staff and students benefit as a result.

4. Acknowledgements.

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