



Trinity College Dublin

Coláiste na Tríonóide, Baile Átha Cliath

The University of Dublin

**Report to Council on the review of the
Joint Certificate in Innovation and Entrepreneurship**

3-4 October 2017

External Reviewers:

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Internal Facilitator:

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JOINT CERTIFICATE IN INNOVATION & ENTREPRENEURSHIP REVIEW REPORT

1. *To assess the effectiveness of the Joint Certificate in Innovation and Entrepreneurship in the context of its joint delivery by Trinity College Dublin, University College Dublin and the Queens University Belfast in accordance with the Agreement signed in May 2013.*
 - 1.1 The original programme functioned for a number of years as an effective collaboration but as a consequence of the divergent developments in the partner institutions, it no longer operates as a collaborative programme delivered by the three institutions. In particular, the UCD involvement has formally concluded as that partner has progressed along an independent path with respect to this subject area. The QUB connection is still very much alive, and indeed highly valuable, but is affected by both geographical and financial constraints. Allowing for the potential of the link with QUB, and other possible partnerships, it is reasonable for Trinity to take the view that it will not be constrained by a past arrangement and that it will proceed in line with the best interests of the Institution.
 - 1.2 The dysfunction of the original partnership is evident from the absence of UCD students from any of the modules in recent cycles of the programme, reflecting its development of alternative internal arrangements, and also from the lack of engagement of UCD staff in the Review. The introduction of QUB as a partner in recent years has been an advantageous development within the programme, and on many modules in 2017, its students now constitute almost 50% of the total registered. Prior to 2017, however, QUB engagement was limited to a handful of students on any module, constituting a definite minority.
 - 1.3 We noted that, while formal survey evaluation is used for core modules (Creative Thinking & Innovation), informal student reflection on learning in class has been used to gather feedback on other modules. In terms of assessing the quality of the programme, the absence of a systematic method of assessing student feedback across all modules is an inherent weakness and something that should be addressed – not least because this can be a useful source of information for marketing purposes. The use of students' individual reflective work as a means of gauging satisfaction with the course should be avoided.
 - 1.4 Our considered view is that the Certificate has evolved to become cohesive and of high quality, comparable with international benchmarks. Specific questions were put to a group of current/past students on the programme convened for the Review. The responses indicated a high degree of satisfaction with the programme, which is regarded as being highly advantageous in terms of enhancing the student's entrepreneurial orientation, improving their future employability, and influencing how they approach their ongoing research. These outputs are very much in line with the programme's aims.
 - 1.5 It is evident that student satisfaction is generally high with respect to the modules, and the the programme as a whole. However, there is an urgent need for Creative Capital to be

restructured, as it has been an issue of concern since 2012. The content needs to be reviewed and delivered in a more appropriate way. A positive feature of recent cycles of the programme has been the introduction of the Leadership module, delivered by QUB, which emphasises that institution's value as a strategic partner going forward.

- 1.6 The effectiveness of the programme is impacted by issues that affect access for students and their willingness to engage in the programme. Supervisors are manifestly important in the process by which PhD students engage with the programme – through encouraging their supervisees to take the Certificate (or enrol on specific modules within the programme suite) as part of their structured PhD. The fact that many supervisors are unaware of the programme is thus a problem. This issue is further exacerbated by: (1) the present lack of clarity regarding available module options on the structured PhD (evident from talking to the students – and returned to below); and (2) the way that the structured PhD tends to reinforce the discipline of the School structure in the delivery of the transferrable skill modules, rather than a thematic offering which may be relevant across the University PhD community.
- 1.7 There is a need for better promotion of the Certificate to the PhD community, especially to sectors such as Arts & Humanities, where uptake until now has been low and a perception may exist that this discipline is more applicable to STEM students than themselves (which could not be further from the truth). In addition, the programme itself would benefit from the participation of a more diverse range of PhD students, which would add strength in terms of the mix of skills and perspectives within the group. Key individuals within the Arts & Humanities departments, particularly supervisors, should be better informed of its value for their students so they can encourage (and help plan) their participation in the programme. The team should review marketing materials and promotion methods used with respect to Arts & Humanities. The development of exemplar cases of past graduates might be advantageous in communicating the message.
- 1.8 It would also assist student access to the programme modules - and especially planning to achieve *completion* of the Certificate - if it were possible to announce module delivery schedules well in advance (an annual programme?). This would permit both students and supervisors to plan work schedules so as to avoid conflicts between progressing the doctoral work and the taking of modules. This may also have the effect of encouraging other audiences, such as PI's and staff, to undertake these modules as part of ongoing CPD and to thereby enhance the entrepreneurial culture of the Institution.
- 1.9 The team delivering the programme is undoubtedly an effective one; as a stable group it has manifestly grown into the role over the years. However, there is a need for more consistent resourcing, of both academic inputs and those of professional practitioners, to support the programme development going forward. The former could be supported by the provision of additional funds and the latter through aligning people through, for example, granting of 'honorary fellow' status (or Trinity equivalent), which has minimal cost implications, but

requires institutional cooperation. This has been shown in other institutions to be an effective mechanism for getting the individuals to commit time and effort to such programmes. There is also a need for increased Institutional support in terms of better access to its marketing and administrative systems (e.g. student records), to enable the effective operation of the programme.

- 1.10 The newly-introduced Academic Oversight Committee is an appropriate governance vehicle for overseeing and developing the programme, but there is an important need for the key personnel involved to ensure they maintain communication lines upwards within the organization to ensure its continued championing. The representation on the AOC would outwardly appear to address the governance issues raised in past board minutes and internal assessments. In the context of UCD as an inactive partner, the continuing relationship with QUB (and prospective relationships with institutions such as the Royal College of Surgeons), become more important and should form the basis of a revised MoU. It would seem appropriate that a representative from QUB is included on the Academic Oversight Committee.
- 1.11 As already alluded to, there are problems with respect to clarity and understanding of the arrangements for structured PhDs. In practice, students taking up to 25 credits of Certificate modules can have these acknowledged as part-fulfilment of the credit requirements of their structured PhD; however if they complete the full 30 credits (and thus achieve the Certificate), then none of these credits can be counted towards their PhD transferrable skills credit requirement. This anomaly appears to the Reviewers as something which undermines the effectiveness (and attractiveness) of the programme to potential students. The issue of double-counting of credits is an important one for educational institutions. However, given that these particular credits are embedded within the structured PhD, where the main award is based upon the thesis element, and achievement of an additional Certificate is advantageous for the future employability of the PhD graduate, then allowing full credits within the structured PhD from achievement of the Certificate award *should surely be allowable* within the structured PhD framework. Despite QUB students not having a structured PhD, they are required to undertake 300 hours of training as part of their PhD and *are* allowed to use the Certificate modules in fulfilment of this requirement and, in parallel, achieve the Certificate award. Despite Trinity being the key provider of the education, as the system currently operates, the Institution would appear to be disadvantaging its own PhD students with regard to their future employability.
- 1.12 It would be desirable that the Dean act to give permission for the 30 credits embodied in the Certificate to be accepted for the structured PhD, and indeed for the taking of *more* than 30 credits to be allowable, so that key home School transferrable skill modules do not 'squeeze' out completion of the Certificate for those who wish to attain the full qualification. We suggest that double counting should be allowed, as the purpose is to encourage more PhD students to undertake the full certificate and no damage to the PhD award is likely to result from their obtaining this double benefit, while it will surely enhance their job

prospects. They would be able to take additional credits (including those their individual schools require) above the 30 credits outside of the structured PhD but achieving an embedded qualification would demonstrate the value of the taught modules within the structured PhD.

- 1.13 The Certificate has been effective not only in the education of the students but also in providing a basis for development of a range of linked activities that align closely with Trinity's strategic direction of travel. It is clear that the academic understanding and material developed specifically for the Certificate have been used directly in other elements within the Academy's expanding profile of activities. These unlooked-for, and educationally and commercially valuable, spin-offs by the Academy will undoubtedly fit well within the developing Hub concept and provide the basis for a whole range of relevant initiatives.
2. *To review the curriculum and comment on the academic standards, the appropriateness of the learning outcomes, and the alignment of the programme learning outcomes with a Level 9 Award on the National Framework of Qualifications*
 - 2.1 To some extent, the issues related to this point in the Terms of Reference have been addressed above. Given the time available for the delivery of the programme, the content would appear to be comprehensive and appropriate to the level and specific aims of the programme. Based on reviewing samples of the work of students, the programme is comparable in terms of outputs with similar programmes delivered in comparable institutions at a European scale (at level 9).
 - 2.2 Programmes of this kind need to evolve to stay relevant, and to incorporate new research, thinking and practice, and it is important that the element of academic input (with respect to both teaching and curriculum development) is maintained, and that there continues to be an appropriate balance between the different categories of expertise involved in delivering the modules.
 - 2.3 The delivery method of the programme seems to have largely contained the perennial 'free-rider' issue that affects group projects, but there is an occasional issue of unwarranted delays in feedback to students that should be addressed.
 - 2.4 We are satisfied, following discussions with those team, that the specifically entrepreneurial element is appropriately contained within the programme, but more explicit reference to the particular analytical frameworks used could be included in the documentation. More emphasis might be given generally to showing the integration of the modules, in terms of their approach and content, within a holistic programme. The Handbook (and Website) should be managed so as to achieve this. At the moment, the Handbook does not incorporate all the elements of the programme - the Leadership module, delivered by QUB, is absent!

3. *To assess the sustainability of the Joint Certificate as an Award, and as part of the Structured PhD programme.*
 - 3.1 In its early years, the programme, and its collaborative structure, reflected the funding then available. Within the new funding landscape (i.e. absence of PRTL), creative effort on the part of the Academy and its staff has permitted the development of a range of new activities. So successful have they been at developing new income streams, that the delivery of the PhD programme is largely dependent upon these spin-offs. At the present time, the programme for PhD students is significantly subsidised from external sources, with QUB's contribution amounting to approximately one-third of the costs. While the Academy is to be congratulated for its response to the ending of the initial package of funding, the risks of this situation are self-evident. The delivery of the Certificate is vulnerable should income sources such as Springboard funding cease, or QUB reduce (or end) their involvement.
 - 3.2 The protection of the Certificate programme (and Innovation Academy) is important in terms of its manifest contribution to Trinity's PhD community, and thus to the attractiveness of the institution as a place to do a doctorate. In addition, the Academy has shown itself to be effective at using its resources to develop 'product' initiatives that have not only allowed the continued delivery of the programme after the ending of initial grant funding, but which also align well to the longer-term strategic objectives of the Institution, justifying its continued institutional championing.
 - 3.3 Generally at Trinity, provision of modules as part of the structured PhD is, by and large, contained within School/ Faculty funding. Most such modules are Faculty-specific, reinforcing the discipline specific knowledge and thus funding remains internal of the School. However, the Academy is cross-disciplinary and sits outside this structure, making the Academy (apart from the Statistics offering) an anomaly within Trinity. The suite of modules are potentially attractive to all PhD students across Trinity, but if there is no mechanism in place by which the Academy can appropriate revenue for delivery then the continued operation becomes an issue. Thus, financial transfers to the Academy from departments whose students wish to take the Certificate/modules needs to be addressed to secure future sustainability and growth. One model that might be considered is that the three main faculties each provide a number of bursaries which would equate overall to the costs involved in delivery of the Certificate programme. This would seem justified in light of the significant contribution to the PhD programme, and the learning it provides, and would establish a stable income source that will allow the Academy to continue to actively develop in line with University's long-term strategic goals.
 - 3.4 Reviewing the situation with respect to the Academy should involve a dynamic rather than static approach. More effectively marketing the programme (especially to Arts & Humanities students), combined with resolving the issues to do with credits and the

structured PhD (discussed above), can be expected to increase the number of PhD students seeking to take modules/the Certificate. Satisfying this demand will require more resources for delivery, thus giving even greater focus to the need for the College to divert resources from core budgets to this Academy activity. A desirable move towards offering such a programme to academic staff (including, perhaps, all new staff, as part of their induction?) would have the effect of reinforcing the demand for PhD places, as supervisors become more aware and supportive of the programme and encourage their students to take modules.

- 3.5 Experience elsewhere suggests that there are a range of reasons why an entrepreneurship and innovation unit is ideally independent of any particular School (even Business). This is so that it does not create barriers to student perception and, more widely, to allow the Academy the flexibility needed to develop in light of emerging opportunities across the full University. Within some broad constraints, the Academy needs to operate in ways that are creatively consistent with its teaching, and to avoid situations where it loses ability to pursue opportunities or is subsidising unconnected activities.
- 3.6 The human resource attached to the programme are largely appropriate and while the delivery may appear overly intensive, there is no obvious case for reducing the human component in the delivery process. It must be remembered that this is only one part of a portfolio of related activities in which staff members are involved and, as such, should be viewed as an *Academy* overhead rather than an input cost for the programme alone.

4. *To review and comment on the procedures that support the quality assurance of Teaching and Learning on the programme.*

- 4.1 This has been dealt with in answers to the previous sections.

Dr Lawrence Dooley (UCC)

Prof Ian Stone (Durham)

TCD-QUB Postgraduate Certificate in Innovation and Entrepreneurship (for PhD students).

Trinity Innovation Academy response to Quality Review outcomes and recommendations:

The Trinity Innovation Academy team would like to begin by thanking those involved in the preparation, planning and execution of the quality review. The preparatory work provided an excellent opportunity for internal reflection and the review itself has resulted in a number of valuable, insightful and implementable recommendations.

We were very pleased that the External Reviewers formed a positive view of the Postgraduate Certificate in Innovation and Entrepreneurship (jointly delivered by Trinity and Queens University Belfast) and its impact on the students that have undertaken the course. We strive to keep the course relevant, and the content current and are pleased that the innovative nature of the course is recognised by the reviewers. We share the reviewer's assumption that the transferrable skills associated with innovation and entrepreneurship education is of growing importance to Trinity students of all disciplines and that the Innovation Academy should remain independent of Schools and Faculties.

We welcome the recommendations for improvement in the review, most notably a rework of the Creative Capital module. Also an ongoing review of the mechanisms by which students' feedback is received. Practical recommendations were offered regarding efficient promotion and recruitment methods. These included a particular emphasis on the development of case studies in order to share the success stories of our graduates with prospective students, and focussed engagement with the academic community who enable their students to take our course. These suggestions have been positively received.

A number of the recommendations will require support from other units within the university, such as access to the central services that are provided to Schools and, crucially, the adoption of a funding arrangement that facilitates programme sustainability. We have begun and will continue to work with each Faculty and with central College to identify and implement suitable arrangements that enable these recommendations to be addressed.

From the review, there are only two recommendations which we feel should not be brought forward to implementation at this time, recognising that both recommendations have merit and the observations that gave rise to them have been taken on board and will be addressed. The first relates to the inclusion of QUB on the Academic Oversight Committee (1.10). This will be addressed through a new MOA, as the remit of the Academic Oversight Committee extends beyond the joint QUB-TCD certificate programme. The second relates to the possible double-counting of credits (1.11 and 1.12) and is a matter for consideration by the Dean of Graduate Studies in the wider context of post-graduate education at Trinity.

Finally, on foot of the review, we have started the processes of concluding the partnership with UCD and of establishing a renewed partnership with QUB that addresses the needs of both universities going forward.

Once again, we would like to thank the external examiners for taking the time and applying their experience and expertise to the review. Innovation education is widely recognised as crucial by all leading universities and we are determined to apply the recommendations of this review to ensure that Trinity remains a strong leader in the field.

Dean of Graduate Studies Response to the Joint Certificate in Innovation & Entrepreneurship Review Report.

1. In general, I welcome the report and indeed thank the reviewers for their very considerable work and thought that underpins the report. My only response is to the comments on pages 2 and 3-4 in relationship to the role of the Certificate within the structured PhD generally, as well as the question of whether a student who completes the Certificate should be able to use the 30ECTS of that course as counting towards their structured PhD. The reviewers recommend this course of action, but, with respect, I would take the opposite view.
2. All PhD students in Trinity are required to undertake no less than 10 and no more than 30 ECTS credits worth of taught modules to complement their PhD research. This remains something of an unnatural graft onto the PhD process in that, whereas they are required to do so, ultimately the degree is awarded exclusively for their submitted thesis. There are a number of generic skills courses available, though many schools operate bespoke and localized skills courses, aimed at enhancing the capacity of the student to flourish as a researcher within his or her discipline. It is impossible to say, empirically, whether it is better for a student to take a generic or a bespoke skills course (this will tend to depend on the student). Finally, students are allowed to make up their credits by taking modules on any level 9 course.. Furthermore the requirements for structured PhD taught options are contained in individual schools PGR handbooks.
3. The thrust of the reviewers' comments on this issue reflect, I would suggest, two things. First, there is an underlying vision that a PhD student is better served by taking generic/cross-discipline skills training than training that is locally focused. With respect, however, there is simply no basis for making this conclusion. This links, moreover, to the second factor, namely that the focus of the reviewers here is, quite understandably, with the well being and enhancement of the certificate. I would respectfully suggest, however, that there is a broader issue at play for the university here (namely the integrity of its PhD programme). In other words, there may be decisions or recommendations that will serve the long term development of the certificate, but would not be in the interests of Trinity's structured PhD.
4. The reviewers imply that the certificate will be of inevitable benefit to students (and suggest, that it would be of *inevitable* benefit from an employability perspective). This is not, however, necessarily the case. Whereas, no doubt, many PhD many students would benefit from studying on the certificate (and I would strongly recommend it), inevitably there are others who will not – either because of (a) their proposed career trajectory, (b) the nature of their research, (c) the loss to them if, by taking the generic credits provided by the certificate, they were unable to take the more bespoke modules offered within their discipline or (d) the key question (not considered in the review) of whether that student can afford the time away from his or her research to fulfil the requirements of the certificate. Indeed this would be a very strong reason *not* to allow students to take more than 30 ECTS of taught

modules as part of the structured PhD (and no doubt many supervisors would agree with this proposition).

5. In other words, the arguments (considered below), for taking steps in relation to the role of the certificate within the structured PhD proceed on the basis of (a) a focus only on the needs of the certificate and (b) an over inflated vision of how important the certificate is to PhD students as a whole.
6. The primary substantive recommendation that concerns me as Dean, is that students should be allowed both to obtain a certificate *and* allow the 30 credits obtained to count in completion of their structured PhD taught requirements. The reviewers (p.3) suggest that this would be a good thing for the certificate (making it more attractive to students) a good thing for 'the future employability of the PhD student' and that 'no damage to the PhD award is likely to result from their obtaining thus double benefit' (presumably because, as the reviewers have concluded, 'the main award [of the PhD degree] is based upon the thesis element').
7. It is strongly submitted that this conclusion must proceed from the vision identified in the previous paragraphs – namely one that assumes a universal importance for the certificate and also that is focused only on the needs of the certificate. In fact such a move would do considerable damage to the PhD programme in two respects and should be resisted.
 - (a) The certificate is an academic award (like all university awards) that stands alone from any other academic award – thus students obtaining certs that might have a pathway into a diploma, are required to rescind the former if the work done thereon is to count to the latter). It is anathema to university principles that one should be allowed to count credits obtained in the pursuit of one academic qualification as fulfilling the requirements of another qualification (unless one rescinds the former qualification). This is why we resist and should resist academic double counting.
 - (b) The only basis by which the reviewer can justify such a recommendation is even more disturbing, however, in that they are, in effect, saying that as the PhD is awarded for the thesis submitted, therefore the taught elements should not really be regarded as having any stand-alone value within the programme (such that it should be legitimate to 'borrow' those taught elements from modules undertaken as part of another qualification. This is, however, precisely the logic adopted by those (increasingly few) supervisors and others who resist the idea of students doing any taught modules as part of their structured PhD. I fully accept that the position of the taught elements of a structured PhD is unique (they are mandatory, examined and must be passed), but nonetheless our university, like most European universities has decided that they are important. The reviewer's suggestion therefore, whereas it may work well for the cert, strikes at the very concept of the stand alone value of structured PhD modules and should be resisted on this basis.