Trinity Education Project:  
A Proposed Assessment Framework and related Academic Year Structure

1.0 Introduction

Goal 3 of the Strategic Plan (2014-19) is focused on the renewal of the Trinity Education, particularly, in relation to the undergraduate curriculum. The Trinity Education Project (TEP) aims to re-articulate a shared vision for the Trinity education across the University.

Strand 3 (Assessment) of the TEP (Terms of Reference, Appendix 1) has been tasked with bringing forward a proposed assessment framework for undergraduate students that:

- embeds graduate attributes in the curriculum;
- is coherent at programme level;
- provides opportunities for students to be actively engaged in the assessment processes;
- reflects the Curriculum Principles (Strand 2);
- is informed by international best practice.

It has also been tasked with bringing forward proposals on how to support academic staff in developing innovative assessment methods that are authentic, relevant and integrated. The proposed framework, together with proposals to support staff are included as Appendix 2.

This first section of this paper presents the overarching recommendations arising from the work of Strand 3 and from discussion at the college-wide consultation fora held on 27 January 2016, 18 April 2016 and at the Undergraduate Studies Committee on 19 April 2016. Three high-level recommendations form the basis of the proposed framework for assessment. The paper also outlines how these recommendations might be achieved and, additionally, invites consideration of whether the Junior Freshman year should be assessed on a pass/fail basis.

The second section of the paper presents two options for the academic year structure. The rationale for presenting the assessment framework and academic year structure together, is that the latter is closely linked to the delivery of the recommendations of Strand 3, in particular, to enable the proposed change in assessment culture across the University.

Section 1: Proposed Assessment Framework

2.0 Purposes of Assessment

Assessment defines the curriculum and drives student learning\(^1\). Whilst protecting academic standards and being valid and reliable, assessment should also play a key role in motivating and engaging students.

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role in engaging students and stimulating learning. A range of meaningful assessment practices across the programme can engage students in their learning and ensure that graduate attributes are assessed.

Assessment has different purposes including:
- to measure achievement (summative assessment/ assessment of learning);
- to engender learning (formative assessment/ assessment for learning);
- to enable learners become aware of how they learn (assessment as learning).

In Trinity, as in many universities, summative assessment dominates, and a substantial proportion of academics’ time is currently spent on examinations and marking. While exams are a necessary form of assessment, the traditional concept that assessment consists primarily or mostly of examinations and essays has been challenged over the last decade. It is acknowledged that the increased complexity of learning needed for the 21st Century graduate cannot be adequately assessed through examinations. High-stakes, summative examination have been shown to act as an incentive for students to study ‘to the test’ and engage in shallow or strategic learning. Yet, the heavy reliance on summative assessment undertaken in our undergraduate programmes does not lead to greater differentiation in student achievement.

The proposed framework for assessment does not advocate replacing exams with a similar amount of continuous assessment. Rather, it advocates fewer, more meaningful assessments across the academic curriculum.

3.0 Recommendations

Recommendation 1:
Graduate attributes are assessed explicitly in the undergraduate curriculum.

A Trinity education should produce graduates who think independently, communicate effectively, develop continuously, and act resiliently. The development of graduate attributes needs to be more than just an espoused list about what our graduates can do. Their achievement must be clearly and appropriately evidenced. This requires an active focus on assessment.

Traditional assessment methods are valid indicators of academic performance or achievement. However, these methods can lead to a focus on assessing content and knowledge. We should enhance the means by which we assess our students’ skills and behaviours. Indeed, it is the capacity to engage with knowledge, skills and behaviours as a whole that is desirable in a graduate.

Graduate attributes can also be achieved in the co-curriculum. College should consider the possibility of formal recognition and validation of co-curricular learning.

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2 OECD, High level group on modernization of higher education. Report to the European Commission on new modes of learning and teaching in higher education.
through the adoption of a valid procedure such as an extended student transcript or a range of appropriate digital ‘badges.’

Recommendation 2:
A range of assessment practices equips students to apply their learning in contexts beyond the University.

A broader range of assessment practices should be utilized so that graduate attributes can be assessed adequately in the undergraduate curriculum. Assessment practices should reflect activities that are beneficial to students beyond graduation. Assessment practices should thus be meaningful to the discipline and realistic in terms of future professional life.

Assessment is for learning as well as for measuring achievement. When students are assessed in activities that seem intrinsically meaningful or useful, they are more likely to engage and invest in deep learning. It is important that students develop assessment literacy - understand the principles, processes and language of assessment, and how assessment can enhance their learning. Assessment practice should thus enable students to reflect on and understand their learning (meta-learning) and should focus more effort on strengthening skills of self-regulation and peer evaluation.

Recommendation 2 advocates assessment pedagogies and practices that prepare students for learning beyond the point of graduation. Examples of current practice include:

1. Broad scale assessment pedagogies applicable across the disciplines, such as problem or enquiry-based learning, competence-based assessment, or discipline specific pedagogies such as Objective Structured Clinical Examinations in Medicine.
2. ‘Real-world’ assessment tasks such as: social policy students preparing a set of guidelines for a lay audience; BESS students writing business plans; literature students writing an abstract or a glossary instead of an essay. In the case the writing of an abstract, this could be extended to mirroring a peer review process, where students form editorial panels and critique each other’s abstracts. Other examples include the design of a children’s novel incorporating history (History); or a Dragon’s Den scenario where students pitch ideas to each other (Computer Science).
3. External audiences: Students creating posters and showcasing them to a lay audience (Microbiology); Presentations of designs to industry experts (Engineering); ‘External dragons’ from software companies attending student pitches and providing feedback (Computer Science).

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3 A digital badge is a ratified indicator of an achievement, an accomplishment or a skill. It can be earned in many learning environments including higher education
4. Research-like activities such as: gathering data on a field trip and preparing a report for the relevant industry as well as for the academic assignment; Laboratory research articulated in oral presentations (Chemistry); Clinical Speech and Language Studies students writing research protocols.

5. Meta-learning: where students monitor their own learning, such as students submitting assignment cover sheets that identify and reflect on their perceived strengths and weaknesses; or students internalising academic evaluation criteria and apply it to their work for a 10% assessment component (Law).

6. Reflection: Assessment activities that explicitly endorse and involve critical reflection, self-critique and evaluation; Reflective practice logs in Education or Clinical Speech and Language Studies; ePortfolios and critical reflection in Pharmacy.

7. Self and Peer assessment: Assessments where students make evaluative judgements on their own work and that of others - greater emphasis on peer feedback and self-assessment (Law).

Recommendation 3:

Assessment is programme-focused

Programme-focused assessment establishes the full picture of assessments across a programme of learning. It improves coherence and cohesiveness, provides pedagogical strength, and encourages collegiality and collaboration in curriculum change. It cultivates good practice for student learning by attending to sequence, timing, amount and range of assessments, clarifying the interconnectedness of modules, and viewing assessment as a linked series of learning opportunities across the whole programme. This is achieved through a mapping process that:

- Addresses assessment distribution
- Identifies any gaps or overlaps in assessment
- Encourages an appropriate range of assessment tasks
- Facilitates the adoption of fewer, more meaningful assessments
- Allows for the appropriate practice, repetition or progression of assessment tasks
- Ensures graduate attributes are assessed at appropriate levels and points of the programme
- Encourages programme teams to teach to collectively owned goals.

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Programme-focused assessment is typically done in stages. It requires the production of an inventory of the curriculum assessment to enable a bird’s eye view of the whole programme.

This assessment mapping exercise typically considers:

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<td>i.</td>
<td>Number of modules</td>
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<td>ii.</td>
<td>Number of assessments (in total)</td>
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<td>iii.</td>
<td>Range/variety of assessments tasks</td>
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<td>iv.</td>
<td>Proportion of examinations to coursework</td>
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<td>v.</td>
<td>Proportion of each type of assessment task</td>
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<td>vi.</td>
<td>Nature of assessments (formative and summative)</td>
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<td>vii.</td>
<td>Sequence of assessments</td>
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<td>viii.</td>
<td>Timing of assessments</td>
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<td>ix.</td>
<td>Level of assessments</td>
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<td>x.</td>
<td>Relationship of assessments to graduate attributes</td>
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<td>xi.</td>
<td>Relationship of assessments to programme outcomes</td>
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<td>xii.</td>
<td>Relationships of assessments to module outcomes</td>
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Programme-focused assessment shifts the focus of assessment from being purely at the module level and encourages assessment that is integrative in nature (i.e. assessment that demonstrates achievement of programme/learning outcomes across modules/semesters/years). This provides opportunities for students to synthesise their learning and stimulates new and creative ways of assessing between and beyond traditional module boundaries.

4.0 Implementation Considerations
To support the implementation of the proposed assessment framework and to facilitate a move away from the very heavy focus on assessment of learning to one of assessment for learning and assessment as learning, consideration should be given to assessing the Junior Freshman year on a pass/fail basis.

Too much emphasis on high-stakes, summative examination has been shown to act as an incentive for undergraduates to study ‘to the test’ and engage in shallow or strategic learning. A concentration on marks and grades feeds a ‘testing’ culture rather than a ‘learning culture’. The rote learning required of students for the Leaving Certificate examination means that that even high achieving second-level students can struggle with the deeper learning that is required in University.

There is a large body of research focused on transition into University. Significant factors in successful transition include negotiation of assessments that promote deeper learning, participation in group work, and achieving a balance between curricular and extra-curricular activities.
The possible benefits of a pass/fail system in Year 1 of an undergraduate programme are highlighted in Table 1 below:

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<thead>
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<th>Table 1 – Possible benefits of a pass/fail Year 1</th>
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<td><strong>Range of teaching, learning and assessment strategies</strong></td>
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<td><strong>Assessment for/as learning</strong></td>
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<td><strong>Range of Assessment</strong></td>
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<td><strong>Graduate Attributes</strong></td>
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<td><strong>Excellence in education</strong></td>
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</table>

Council is invited to consider the Assessment Framework as presented. We also ask Council to consider the benefits of having Junior Freshman as a pass/fail year. If there is support for assessing Junior Freshman on a pass/fail basis, we then seek permission to present a fully developed proposal by the end of this academic year.
Appendix 1: Membership and Terms of Reference, Strand 3 Assessment

STRAND 3 : ASSESSMENT STRAND
MEMBERSHIP AND TERMS OF REFERENCE

MEMBERSHIP
1. Dr Ciara O’Farrell, Senior Academic Developer Chair
2. Assoc. Prof. Computer Science Prof. Brendan Tangney
3. Prof. Mechanical and Manufacturing Eng. Prof David Taylor
4. Clinical Speech and Language Studies Dr Pauline Sloane
5. Law Dr Des Ryan
6. School of Education Dr Aiden Seery
7. Education Officer, Student’s Union Ms Molly Kenny
8. Project Manager Ms Fedelma McNamara

TERMS OF REFERENCE
1. To bring forward to the Steering Committee a proposed assessment framework for undergraduate programmes that
   a. embeds the graduate attributes
   b. is coherent at programme level
   c. provides opportunities for students to be actively engaged in the assessment process within and beyond the discipline-specific
   d. reflects the Curriculum Principles (Strand 2)
   e. is informed by best international practice

2. To bring forward to the Steering Committee proposals on how to support academic staff in developing innovative assessment methods that are authentic, relevant and integrated.

3. Other issues the Chair considers relevant

4. To contribute to the work of Strand 1 Stakeholder Management and Communication in ensuring the objectives of this Strand are communicated and understood.
Appendix 2:
Proposed Assessment Framework for Undergraduate Programmes:
Stand 3 of the Trinity Education Project: Assessment.

Strand 3: Terms of reference
5. To bring forward to the Steering Committee a proposed assessment framework for undergraduate programmes that
   a. embeds the graduate attributes
   b. is coherent at programme level
   c. provides opportunities for students to be actively engaged in the assessment process within and beyond the discipline-specific
   d. reflects the Curriculum Principles (Strand 2)
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6. To bring forward to the Steering Committee proposals on how to support academic staff in developing innovative assessment methods that are authentic, relevant and integrated.

7. Other issues the Chair considers relevant

8. To contribute to the work of Strand 1 Stakeholder Management and Communication in ensuring the objectives of this Strand are communicated and understood.

Strand 3: Membership
Dr. Ciara O’Farrell, Senior Academic Developer (Chair)
Prof. Brendan Tangney, Assoc. Prof. Computer Science
Prof. David Taylor, Mechanical and Manufacturing Engineering
Dr. Pauline Sloane, Clinical Speech and Language Studies
Dr. Des Ryan, Law
Dr. Aiden Seery, School of Education
Ms. Molly Kenny, Education Officer, Student’s Union
Ms. Fedelma McNamara, Project Manager
Strand 3 Recommendations:

We recommend that:

1. Graduate attributes are assessed explicitly in the undergraduate curriculum.

2. A range of assessment practices equips students to apply their learning in contexts beyond the University.

3. Assessment is programme focused.

For these recommendations to be achieved successfully, the following enablers will be necessary:

Professional development opportunities that support academics to develop effective assessment practices.

Fractional secondments/sabbaticals to Academic Practice.

Meaningful quality assurance policies and procedures that support the sustained implementation of the proposed assessment framework.

Technology that supports assessment processes.

Reward and recognition of excellence in teaching, learning and assessment.

Part 1: Introduction

Assessment defines what the student regards as important, how they spend their time and how they come to see themselves as students and then as graduates.’ (Brown and Knight, 1994:7)

This paper presents a proposed framework for the assessment of undergraduate programmes in Trinity College Dublin. In line with the terms of reference for this strand, the proposed framework:

- Embeds graduate attributes in the curriculum,
- Is coherent at programme level;
- Provides opportunities for engages students to be actively engaged in the assessment processes;
- Reflects the Curriculum Principles (strand 2);
- Is informed by international best practice.

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An extensive body of knowledge on assessment practice exists in the literature and provides the basis for a scholarly approach to the framework.

**Benefits of an institutional assessment framework:**

Modularisation has resulted in an increased growth in summative assessment and a concomitant increase in marking, moderation, administration and quality assurance. Recent assessment fora in Trinity have shown that there are excellent examples of assessment practices that inspire and support learning across College. An assessment framework will enable Trinity reappraise its current approach to assessment practice, share good practice in assessment, address assessment challenges, and identify targeted areas to transform its assessment provision. The proposed framework does not advocate the implementation of whole new programmes of assessment. Instead it recommends fewer but more meaningful assessments, thus benefitting students, academics and administrators.

The proposed framework makes three main recommendations in relation to assessment of graduate attributes, programme-focused assessment and range of assessment. Potential benefits of each recommendation are outlined below and are explored more fully in the recommendations section of this report.

**Assessment of graduate attributes:**

- Ensures that sought-after graduate qualities are assessed essential for learning beyond the university;
- Increases student satisfaction. Students today expect that their University learning experience will offer them opportunities to achieve attributes that enable them move to rewarding careers;
- Encourages the university experience to be about personal as well as intellectual growth.

**Programme-focused assessment:**

- Identifies overlap or gaps in assessment;
- Identifies over assessment;
- Facilitates differentiation between learning outcomes that only need to be assessed once and slow learnt competencies that need more practice;
- Opens up a range of purposeful assessment tools;
- Reduces resources spent on summative high stakes assessment and time spent on quality checks such as second marking, moderation, external examiners and assessment boards;
- Leads to a more coherent, cohesive student learning experience;
- Engages the College community in a structured, ongoing conversation about assessment;
- Raises awareness and dialogue about assessment throughout College and enables successful practices to be shared across disciplines.
Range of assessment:

- Ensures that various forms of assessment are utilised to their best advantage within the discipline;
- Encourages purposeful, authentic assessment practices;
- Shifts the balance from assessment of learning (summative assessment) towards assessment for learning (formative) or as learning (metalearning);
- Increases student engagement in the assessment process, encourages students to become proactive in their own learning.

Rationale for change

There is more leverage to improve teaching through changing assessment than there is in changing anything else (Gibbs & Simpson, 2004:22). 8

Examinations have not always featured as prominently in the life of universities as they do today. Indeed McDowell and Webb in their history of college state that Trinity ‘possesses the questionable distinction of being the cradle of the public examination system’. 9 It is commonly accepted that assessment defines the curriculum and drives student learning. Assessment is a fundamental function of higher education and ‘has a vital impact on student behaviour, staff time, university reputations, league tables and, most of all, students’ future lives’. 10 Assessment should therefore play a key role in motivating and challenging students and stimulating learning, whilst protecting academic standards and being valid and reliable. Despite this, assessment is often an afterthought in programme and module design, with assessment of learning (the measuring and accreditation of learning) taking priority over assessment that acts as a vehicle for learning.

In Trinity, as in many universities, a substantial proportion of academics’ time is currently spent on examinations and marking. While exams are a necessary form of assessment, the traditional concept that assessment consists primarily or mostly of examinations and essays has been challenged vehemently over the last decade. High-stake, summative examination has been shown to act as an incentive to study ‘to the test’ and engage in shallow or strategic learning. A concentration on marks and/or grades feeds a ‘testing’ culture and it is acknowledged that the increased complexity of learning needed for the 21st Century graduate cannot be adequately assessed through examinations. 11 Traditional assessment practices in higher education do not adequately equip students for assessment challenges they will face.

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11 OECD, High level group on modernization of higher education. Report to the European Commission on new modes of learning and teaching in higher education.
as graduates or for learning throughout their lives.\textsuperscript{12} They are insufficient to ensure that graduates possess a balance of knowledge, skills and dispositions to face the cognitive and operational challenges of the ‘supercomplex’\textsuperscript{13}, uncertain world they are entering which demands constant re-learning in rapidly changing contexts:

\textit{Assessment prepares students for the realities of professional practice in a technology-mediated, information-rich, and increasingly collaborative workplace. If we want learners to engage with ambiguous and complex problems, including those drawn from real life, then we need new forms of assessment that document the higher-order thinking and problem solving that students demonstrate.} (Lombardi, 2008:2) \textsuperscript{14}

There is considerable consensus in the research literature that a variety of assessment strategies should be employed purposefully over a full programme to promote learning. Traditional summative assessment practices, with a focus on ‘knowing’ rather than ‘doing’ or ‘being’, can tend to result in students taking a surface approach to their learning and a culture of assessment for grades and marks rather than assessment for learning. This is compounded by a modularised system that can result in assessment being broad but not deep, and focused on the micro/module level. It can also lead to assessment overload for both students and staff.

However, assessment has the potential to ensure that Trinity Graduates are prepared for further academic study or for a rewarding career, and that they possess the ‘meta’ skills needed for a lifetime of learning. Such ‘meta’ skills include:

\begin{itemize}
  \item Meta-learning skills, or the ability to make informed judgments about their learning and performance levels and that of their peers;
  \item Metacognitive skills, or self-awareness, self-regulation and their application.
  \item Meta-work skills, or higher-order evaluation skills needed to identify and capitalize on learning opportunities throughout their careers.
\end{itemize}


Part 2: Assessment Framework

Proposed Assessment Framework

This framework recommends that Programmes in the Trinity Curriculum be designed to include a range of appropriate assessment strategies and tasks that support effective learning, provide students with opportunities to practice new forms of assessment, and enable achievement of the full spectrum of graduate attributes. The framework is cyclical and represents an institutional approach that encourages ownership and development of an effective and innovative assessment strategy. It has three interrelated layers:

1. Tenets
2. Enablers
3. Areas of Focus

The first layer (outside circle) shows the tenets, or underpinning principles that inform assessment in Trinity. The middle circle delineates institutional enablers of assessment change. The innermost circle represents the areas of focus that are recommended by this strand. Collectively, the framework depicts a structure for enabling transformation in assessment practices and policy in Trinity.
1. Assessment tenets
The following tenets (which align to strand 2 curriculum principles) are proposed:

Assessment in Trinity will:
(i) Support the acquisition of graduate attributes;
(ii) Support learning;
(iii) Be programme-focused;
(iv) Support meta-learning;
(v) Actively engage students and staff.

Assessment supports the acquisition of graduate attributes
Graduate attributes are embedded and assessed incrementally and systematically throughout the programme, through a diverse and complementary range of assessments.

Assessment supports learning
Assessment is valid, reliable, transparent, relevant and conducive to effective learning, whilst protecting academic standards. It supports future as well as present learning.

Assessment is programme-focused
Assessment is an integral part of programme design and development. A range of purposeful assessment tasks are mapped and integrated throughout a programme. By shifting the focus away from end-of-year summative assessment, more integrative assessment practices are considered.

Assessment supports meta-learning
Assessment builds and rewards student ability to reflect on and critically evaluate their own learning, and to assess the quality of their performance against agreed standards. Assessment also builds student capacity to use these skills of judgment to influence future learning and practice.

Assessment actively engages students
Real world assessment tasks engage students in learning. Dialogue about the assessment process is encouraged amongst and between staff and students so that the purposes and standards of assessment are understood.

2. Assessment enablers
Constructive change in assessment practices and policy in Trinity is enabled by development of an infrastructure to support change. The following areas are considered essential enablers:

1. Professional Development
2. Fractional secondments/sabbaticals to Academic Practice
3. Quality (including curriculum review and development)
4. Technology
3. Areas of focus
The following areas of focus are integral to the framework and to enhancing assessment in Trinity:

(i) Assessment of Graduate Attributes
(ii) Programme-focused assessment
(iii) Range of Assessment
(iv) Self & Peer assessment

This section will now be explored in more detail and recommendations made.

Part 3: Recommendations:

1. Assessment of Graduate Attributes:

Terms of reference for this strand state that relevant, authentic assessment embeds and supports the acquisition of graduate attributes within and beyond the discipline.

Rationale
The literature has stated that graduate attributes can be difficult to specify and challenging to assess being a mix of context or discipline-specific dispositions, attitudes, practices and understandings. Not surprisingly, for many students the development of graduate attributes is an implicit rather than explicit consequence of their university experience and often they do not make the connection between an assessment and the learning outcomes or graduate attributes that it develops. Research over the past twenty years has shown that the most successful evidence of the achievement of graduate attributes is when they are explicitly articulated, aligned and embedded in the curriculum and contextualized and assessed within the discipline. However, while traditional discipline assessments are more effective in evidencing cognitive domains of attributes or skills (such as communication capabilities) they are less successful in assessing attributes relating to attitude, values or metacognitive abilities (such as a sense of responsibility). These have been termed ‘wicked competencies’ and there is recognition that they cannot always be reliably assessed. In such cases it is recommended that we devise alternative ways of making information of student achievement available to stakeholders.


attributes must be embedded fully in the curriculum, given appropriate discipline translation, and explicitly assessed.

Students also have a role to play in assessing or articulating achievement of their learning beyond the traditional curriculum. The literature notes that graduate attributes are developed through students engaging in the learning experience both intellectually, through the curriculum, and through participation in the social community of the university, for example through co-curricular activity.  

The extra-curricular program provided by a university has a huge effect on the kind of graduates which it produces [...] Universities with a reputation for producing graduates who go on to be leaders in their fields often foster student leadership in a vibrant campus environment with plenty of opportunities for students to develop their skills through extra-curricular activities.

Co-Curricular and extra-curricular activities encompass a broad range of activities, which are an extension to a student’s university studies and complement the academic curriculum. They promote the student’s academic, personal and professional development and, in this way, contribute to the achievement of the graduate attributes. Examples include involvement with clubs and societies, volunteering, peer mentoring, and summer work placements.

Co-curricular activities are not credit bearing, although specific types of activity might be formally recognised by the university and recorded as an extension to the student’s transcript. Extra-curricular activities are not formally recognised by the university for inclusion in the extension to the transcript.

Many graduate attributes are acquired informally, outside the classroom or through co-curricular activities. Trinity College provides excellent opportunities for students to participate in co-curricular activity such as clubs, societies, sport and student organisations. Trinity should enable our students to partake in co-curricular activities and facilitate them to reflect on and articulate attributes achieved through participation. This articulation should not be assessed through a grade or mark, though College should consider the possibility of formal recognition and validation of co-curricular learning through the adoption of a valid procedure such as an extended student transcript or a range of appropriate digital ‘badges.’

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20 A digital badge is a ratified indicator of an achievement, an accomplishment or a skill. It can be earned in many learning environments including higher education
Recommendation 1:
We recommend that:

1. Graduate attributes are assessed explicitly in the undergraduate curriculum.

(ii) Range of assessment

Terms of reference for this strand state that the proposed framework provides support for academic staff in developing innovative assessment methods that are authentic, relevant and integrated.

Rationale

At the centre of the proposed framework is the principle that there should be fewer, but more meaningful assessments and these should be distributed more effectively across the academic year/s. Within this distribution, a broader range of assessment practices should be utilized to adequately assess graduate attributes in the undergraduate curriculum. Assessment practices should aim to be authentic and relevant, connecting university learning to real-world challenges, and should equip students to apply their learning in contexts beyond the University.

Despite the challenges of assessing graduate attributes, they are highly valued in the workplace and employers actively seek graduates who possess a balanced combination of appropriate knowledge, skills and dispositions. It is widely accepted that assessments practices should reflect activities that will be useful to students beyond graduation. Authenticity in assessment practices (in terms of process, task and audience) helps ensure that a fuller range of graduate attributes is assessed and is particularly effective in engaging students in their learning.21 ‘Authentic’ or ‘real world’ assessment deliberately reflects the ambiguities and complexities of real world-contexts where unpredictability, reflection, and engagement with others are required. It engages students in authentic processes, practices and tasks distinctive and relevant to the discipline and realistic in terms of the professional domain.

This recommendation advocates the adoption or extension of current assessment pedagogies and practices that prepare students for learning needed beyond the point of graduation. Examples of current practice and include:

8. *Broad scale assessment pedagogies* applicable across the disciplines, such as problem or enquiry-based learning, competence-based assessment, or discipline specific pedagogies such as Objective Structured Clinical Examinations in Medicine.

9. *'Real-world' assessment tasks* such as: social policy students preparing a set of guidelines for a lay audience; BESS students writing business plans; literature students writing an abstract or a glossary instead of an essay. In

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21 AAGLO: Assessing and Assuring Australian Graduate Outcomes
the case the writing of an abstract, this could be extended to mirroring a peer review process, where students form editorial panels and critique each other’s abstracts. Other examples include the design of a children’s novel incorporating history (History); or a Dragon’s Den scenario where students pitch ideas to each other (Computer Science).

10. **External audiences:** Students creating posters and showcasing them to a lay audience (Microbiology); Presentations of designs to industry experts (Engineering); ‘External dragons’ from software companies attending student pitches and providing feedback (Computer Science).

11. **Research-like activities** such as: gathering data on a field trip and preparing a report for the relevant industry as well as for the academic assignment; Laboratory research articulated in oral presentations (Chemistry); Clinical Speech and Language Studies students writing research protocols.

12. **Meta-learning:** where students monitor their own learning, such as students submitting assignment cover sheets that identify and reflect on their perceived strengths and weaknesses; or students internalising academic evaluation criteria and apply it to their work for a 10% assessment component (Law).

13. **Reflection:** Assessment activities that explicitly endorse and involve critical reflection, self-critique and evaluation; Reflective practice logs in Education or Clinical Speech and Language Studies; ePortfolios and critical reflection in Pharmacy.

14. **Self and Peer assessment:** Assessments where students make evaluative judgements on their own work and that of others - greater emphasis on peer feedback and self-assessment (Law).

In Australia Boud and Falchikov advocate ‘learning-orientated assessment’ or assessment that fosters long-term learning. They argue that this role of assessment should be given equal attention to assessment for certification and assessment that aids current learning. Authentic, relevant assessment practices can connect and apply university learning to real-world challenges, and prepare students to apply their learning in contexts beyond the University. As Brew notes, ‘Assessment process should prepare students not just to solve problems we already know the answer to, but to solve problems we cannot at the moment even conceive.’

Assessment practices should engage students and encourage them to take responsibility for their learning. That ‘students and teachers become responsible partners in learning and assessment’ is one of Boud’s seven propositions for assessment reform in higher education. Research has shown that when students are assessed in activities that seem intrinsically meaningful or useful, they are more likely to engage and invest in deep learning. Assessment is for learning as well as

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for measuring achievement. Assessment should enable students to become more reflective about their learning, more active and independent as learners, and promote ownership of learning, self-regulation, student autonomy and higher order learning. It is important that students develop assessment literacy - understand the principles, processes and language of assessment, and how assessment can enhance their learning. Engagement in intentional discussion with our students about assessment standards, where the community’s authority and expertise is shared, can enable this. Assessment practice should thus enable students to reflect on and understand their learning (meta-learning) and should focus more effort on strengthening skills of self-regulation and peer evaluation.

The literature testifies to a groundswell of interest in self and peer assessment as tools that build upon capacity for self-regulation and that strengthen metacognitive skills and encourage reflection on learning, or ‘meta-learning.’ The capacity for self and peer-regulation are important graduate attributes and Trinity students should not only be prepared to perform well in assessment tasks designed by others but to make judgments about their own work and that of their peers in terms of what constitutes quality. Traditional examinations place little emphasis on student capacity to judge either their own work or that of others; assessments should thus help students to develop the capacity to reflect on and assess learning, and focus more effort on strengthening skills of self and peer assessment. 25 Peer and Self-assessment can be seen as an assessment-learning tool, and a learn-how-to-assess tool; 26 and this tool is a possible lever to shift the culture away from a testing culture where assessment is undertaken to satisfy the assessor, towards an assessment culture that prepares students for life as graduates.

Recommendation 2
We recommend that:

A range of assessment practices equips students to apply their learning in contexts beyond the University.

(ii) Programme-focused assessment.

Programme-focused assessment will enable a purposeful range of assessments be mapped and integrated across a programme:

*The development of a full range of graduate attributes requires a systematic approach to assessment that builds and enhances those attributes through*

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tasks that are diverse, complementary to each other and embedded strategically throughout a programme of study (Boud et al, 2010:3). 

Managing such a complex issue as assessment requires an integrated approach. A programme-focused approach to assessment is where assessment is mapped and organized holistically across a programme and where an overarching programme framework guides the design and development of assessment within modules to ensure achievement of programme outcomes. Assessment for and as learning is central to this approach as whole-of-programme curriculum design aligns programme and learning outcomes, teaching activities and assessments.

Programme-focused assessment also shifts the focus of assessment from being purely at the module level, and encourages design and delivery of assessment that is integrative in nature (i.e. demonstrate achievement of programme/learning outcomes across modules/semesters/years). It also ensures that graduate attributes (that often sit at programme level) can be assessed throughout the programme. Finally, it encourages academics and students to experience their programme as a cohesive and coherent whole, rather than ticking off modules and marks attained. This approach requires us to redefine assessment, to move beyond traditional assessment approaches, and to embrace new and creative ways of assessing between and beyond traditional discipline boundaries.

Whilst recognizing the importance of disciplinary knowledge, strand 1 states that programmes will enable students to learn beyond their discipline, and must enable students to exercise choice in terms of whether they take the specified maximum or minimum number of credits within core programme. A multidisciplinary, interdisciplinary and transdisciplinary assessment environment will thus span a range of contexts and the use of inclusive, authentic and integrative assessment practices will provide students with the breadth and depth of learning to enable a contemporary view of disciplines that bridge traditional knowledge, and enable complex problem synthesis and evaluation. Assessment beyond the discipline will also assist students in acquiring graduate attributes such as knowing how to organize and participate in inter-disciplinary processes and projects and how to communicate across academic disciplines with relevant stakeholders. It also provides potential opportunities for students to contribute to the solution of local and global issues, and to foster students’ ability to compare and contrast different methods and approaches, clarify how differences and similarities relate to a designated task, or generate a synthesis and integrated framework or more holistic understanding of a theme, question or problem. New ways of assessing multi and transdisciplinary programmes and modules should be considered, where appropriate.

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Rationale for programme-focused assessment

In Trinity College Dublin, as in the UK, Europe, Australia and the US, most degree programmes are modular in nature. The treatment and assessment of modules as discrete units of learning can lead to overload of marking and assessment being meaningful at modular level but not at programme level, resulting in a ‘piecemeal’ approach to assessment and fragmentation of learning. A programme-focused approach understands that the whole of the programme is greater than the sum of its parts and cultivates conditions for student learning by attending to sequence, timing and range of assessments, clarifying the interconnectedness of modules, and viewing assessment as a linked series of learning opportunities across the whole programme (Jessop, Hakim and Gibbs, 2014).29

Bloxman and Boyd (2007)30 summarise the rationale for a programme-focused approach:

- Complex outcomes that represent an integrated combination of achievements are unlikely to be assessable within a single module;
- Repeated demonstrations of assessment tasks in differed contexts are required to assure reliability;
- Students need to demonstrate progression in the quality or standard of tasks repeated across the years of a program;
- Different methods are needed to achieve an appropriate balance of emphasis on formative and summative assessment throughout a program (e.g. group work, self and peer assessment);
- Program-level assessment planning reduces inefficient duplication of student support.

A programme-focused approach enables more appropriate assessment of knowledge, skills and competencies and cuts across traditional module boundaries. While a wide variety of assessment tasks may be beneficial in terms of inclusivity and learning styles, a balance needs to be achieved between the variety and challenge of assessment. Too great a range of assessment is counterproductive, as students need to practice the assessment technique to become proficient in it. The variety and level of challenge of the assessment tasks are considered in a programme-focused approach. Students benefit from planned learning and assessment strategies, and the risk of atomization of learning is reduced because a logical flow and connections between modules are made explicit. Students thus learn to transfer their learning across modules and build up their discipline expertise in a more integrated way. Not only is ‘atomization’ of learning addressed, but in a contextual reality where it is rare.


for programme teams to teach to collectively owned goals. This approach, properly managed, also encourages a collaborative team approach to design, development and implementation of a programme of learning, enabling the sharing of good practice in assessment and overall programme design. The overall approach to programme assessment is reviewed annually at a programmatic level.

The Australian Assessing and Assuring Graduate Learning Outcomes project states that the coordination of programme-focused assessment is a complex undertaking with implications for resourcing, infrastructure and quality assurance practices. Among the challenges are:

- **Adopting graduate attributes**: achieving a shared conceptualization; ensuring programme responsibility; aligning to requirements of professional, statutory or regulatory bodies; influencing actual practice – operationalization.
- **Mapping learning outcomes across a programme**: determining an approach/mapping tool; engaging staff meaningfully; ensuring the process is a driver of curriculum renewal and not purely administrative; managing identification of programme gaps or inconsistencies.
- **Making assessment fit-for-purpose** and providing for progression.

QQI Core Statutory Quality Assurance Guidelines states that an institutional assessment framework should establish that assessment methods are regulated and they are reviewed and renewed as necessary to adapt to evolving requirements. Graduate attributes must be taught, integrated, embedded and assessed in a curriculum within a discipline. The perspective from the literature is that graduate attributes need to be more than just a list and espousal from institutions about what their graduates can do, but an active focus at the grassroots level so that opportunities for development of graduate attributes are identified and mapped across a programme. A checklist approach to graduate attributes is considered dangerous as it encourages a fragmented curriculum; however, resistance by academic staff to curriculum change, to incursions into their programme content, lack of enthusiasm, time demands and little commitment to engage in professional development activities have all been cited in the literature as barriers to a programme-focused approach. While programme-focused assessment should

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provide pedagogical coherence and strength, collegiality and collaborative meaning-making in curriculum change. The literature suggests that this requires a non-judgmental and consultative approach, so that programme mapping is a catalyst for reflection and collegial dialogue, rather than an unwelcome imposition or a source of resentment. Professional development and support is thus an important enabler.

Programme-focused assessment will be achieved through leadership by course directors, staff professional development, quality assurance and through use of technology to support the development of guidelines, resources and tools. These enablers are discussed in part 4 of this report.

Recommendation 3
We recommend that:
Assessment is programme focused.

Part 4: Enablers
Terms of reference:
To bring forward to the Steering Committee proposals on how to support academic staff in developing innovative assessment methods that are authentic, relevant and integrated.

1) Professional Development in Academic Practice
2) Fractional secondments/sabbaticals to Academic Practice
3) Quality (including curriculum review and development)
4) Use of technology to enhance assessment practices and processes
5) Reward and recognition


1. Professional Development

<table>
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<th>Enabler 1:</th>
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<td>Professional learning opportunities, and support for academics to develop effective assessment practices.</td>
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The institution needs to support its teaching staff [...] in the design, development and delivery of curricula and in the assessment of student performance. The senior management need to spread the message that effective, learning focused teaching is expected from all staff (not just the enthusiasts), and to promote this message systematically, connecting it clearly to institutional priorities (p.26).

Adequate opportunities for ongoing professional development are key to the successful implementation of the proposed assessment framework. As Guskey states, ‘One constant finding in the research literature is that notable improvements in education almost never take place in the absence of professional development’ (p.4). 39 Coordinated and meaningful approaches are necessary to support staff in the area of assessment of student learning.

Provision of professional development in assessment for programme directors, leaders of teaching and learning, and academic staff at all stages of their career will:

- Highlight, disseminate and embed successful assessment practices in Trinity;
- Align to existing for credit and not for credit professional development offerings such as the Special Purpose Certificate in Academic Practice;
- Align to related and interconnected areas such as curriculum and pedagogy development;
- Enable professional development in the face-to-face, blended and online environment;
- Support the development of ample resources for the proposed assessment framework (e.g. A programme mapping tool, good practice repository);
- Develop and disseminate guidelines and resources to support staff designing and delivering assessment.

CAPSL is well positioned to provide such professional development but will need to be adequately resourced and have the capacity to undertake the support initiatives necessary to enable sustained implementation of this framework.

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38 High level group on the modernization of higher education (2013). Report to the European Commission on Improving the Quality of Teaching and Learning in Europe’s Higher Education Institutions.

2. Fractional secondments/sabbaticals to Academic Practice

**Enabler 2:**
Fractional secondments/sabbaticals to Academic Practice through a Teaching Fellow scheme.

Fractional secondments or sabbaticals as Trinity Education or teaching and learning fellows would support CAPSL in implementing key strategic priorities of the Trinity Education Project. Successful applicants would be expected to engage colleagues in the implementation phase of the Trinity Education Project, and to lead a predetermined research-based teaching & learning project, embedding teaching & learning initiatives within the discipline. Focusing on specific educational themes (for example, the assessment of graduate attributes in the Curriculum), staff members with the necessary pedagogic skills to develop and undertake strategic, high profile activities would contribute to the implementation of the Trinity Education agenda by serving as role models in education, leading on teaching & learning initiatives within their discipline or faculty, and driving teaching & learning innovation.

Seconded to CAPSL for a small percentage of their time (a number of days per week over a year) this would build capacity for CAPSL, promote a multi and transdisciplinary approach to teaching and learning, and enhance the Trinity education through enabling application of broad scale initiatives to discipline-specific contexts. One secondment per faculty could be considered initially.

Teaching Fellow schemes operate internationally, both at a national level (eg. the Australian Learning and Teaching Fellows), and at Institution level (eg. University College London where seconded teaching & learning fellows aid the awareness and implementation of their strategic education reform, the ‘Connected Curriculum’.)

3. Quality

**Enabler 3:**
Meaningful quality assurance policies and procedures that support the sustained implementation of the assessment framework.

Assessment policy needs the support of meaningful quality assurance policies and procedures for sustained implementation. In Trinity the Quality office can support the implementation of assessment recommendations by framing questions and processes to verified through the quality review procedure such as surveys, focus groups, programmatic reviews, school reviews and thematic reviews. It can and contribute to policy development in assessment, track assessment and graduate attributes and provide customized reports from the Irish Survey of Student Engagement.

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4. Technology and assessment

| Enabler 4: |
| Technology that supports assessment processes. |

Just as technology can be used to supplement or transform approaches to teaching and learning so too can technology be used in a variety of ways to support the assessment process. In the first instance, a programme mapping tool will need to be developed and implemented. At the level of productivity tools on-line submission systems assist in managing and keeping track of student work, and plagiarism detection systems, such as TurnItIn, can assist in detecting student assessments which requires further scrutiny and at the same time assist students in understanding academic integrity. There is a long history in the use of technology to assist in the correction of multiple choice assessments. More recently e-portfolios are receiving a lot of attention from both educational researchers and practitioners. Portfolios lend themselves to both summative and formative assessment and are also used as an evidence base for recognition of prior learning. When implemented in an electronic format (an e-portfolio) the content can be extended to include the full range of multi-media formats, including images and video. Because they can be easily shared, but in a controlled fashion, e-portfolios can facilitate peer-assessment strategies. They are also a useful tool for supporting integrative assessments, reflection and meta-learning.

One particularly interesting form of innovative assessment which technology supports is Adaptive Comparative Judgement. In the ACJ approach a small team of assessors are presented with a number of pieces of student work in a pairwise fashion. For each pair all the assessor is required to do is to decide which of the two is the better, according to the agreed assessment rubric. The computer software tool intelligently, and dynamically, picks which pairs to present to each assessor and the approach has been shown to demonstrate both very high validity and reliability. Furthermore ACJ helps generate an informed discussion within the team of assessors and also lends itself to peer assessment methodologies. Closer to home Trinity's

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41 Pollitt, A., The method of adaptive comparative judgement. Assessment in Education: Principles, Policy & Practice, 2012. 19(3): p. 281-300 “Adaptive Comparative Judgement (ACJ) is a modification of Thurstone’s method of comparative judgement that exploits the power of adaptivity, but in scoring rather than testing. Professional judgement by teachers replaces the marking of tests; a judge is asked to compare the work of two students and simply to decide which of them is the better. From many such comparisons a measurement scale is created showing the relative quality of students’ work; this can then be referenced in familiar ways to generate test results. The judges are asked only to make a valid decision about quality, yet ACJ achieves extremely high levels of reliability, often considerably higher than practicable operational marking can achieve. It therefore offers a radical alternative to the pursuit of reliability through detailed marking schemes. ACJ is clearly appropriate for performances like writing or art, and for complex portfolios or reports, but may be useful in other contexts too. ACJ offers a new way to involve all teachers in summative as well as formative assessment.”
Learnovate Centre is developing a tool (SkillTrack) to interpret, visualize and assess evidence of student learning of 21st skills such as problem solving.

Neither tool is offered as a panacea to be used across the board but rather are highlighted as exemplars of the type of technology-enabled innovations which are emerging which can improve both the practicalities of the assessment process while at the same time adding to the richness of the assessment culture in the university.

5. Reward and Recognition

**Enabler 5:**
Reward and recognition of excellence in teaching, learning and assessment.

There are several award schemes in operation in College for teaching and learning. These include the Provost’s Teaching Awards, various Faculty awards in innovation in teaching, and the Trinity Teaching Innovation Grants. An approach directly aligning such awards to the Trinity Education Project, and development of criteria appropriate to excellence or leadership in assessment (or other core areas of the Trinity Education Project) would encourage, recognise and reward innovation and development in these areas. Promotions metrics can also reinforce the importance of the Trinity Education by rewarding teaching & learning excellence, effective education leadership and impact on the education domain in core areas.

**Assessment framework glossary:**

**Assessment of Learning/summative assessment** measures performance. It ensures standards, acts as a focus for institutional accountability and quality assurance, and involves making judgments about students’ achievement for purposes of selection and certification.

**Assessment for learning/formative assessment** is formative and diagnostic, with an emphasis on feedback and support. Its focus is on helping students learn through feedback, and allows teaching and learning activities to be changed in response to the needs of the learner.

**Assessment as learning (meta-learning)** promotes students’ active engagement in the assessment process. This could be by participating in peer assessment, working with assessment criteria, or self-monitoring of progress, all of which are promoted as moments of learning themselves (Black and William, 1998). Students are encouraged to have a deeper understanding of the assessment process and its expected standards of achievement, and to reflect on and adjust their own learning accordingly.

**Self-assessment** is ‘a process of formative assessment during which students reflect and evaluate the quality of their work and their learning, judge the degree to which
they reflect explicitly stated goals or criteria, identify strengths and weaknesses in their work, and revise accordingly’ (Andrade and Du, 2007:160).

**Peer assessment** ‘requires students to provide either feedback or grades (or both) to their peers on a product or a performance, based on the criteria of excellence for that product or event which students have been involved in determining’ (Falchikov, 2007: 132).

**Co-Curricular and extra-curricular activities** encompass a broad range of activities, which are an extension to a student’s university studies and complement the academic curriculum. They promote the student’s academic, personal and professional development and, in this way, contribute to the achievement of the graduate attributes. Examples include involvement with clubs and societies, volunteering, peer mentoring, and summer work placements.

**Co-curricular** activities are not credit bearing, although specific types of activity might be formally recognised by the university and recorded as an extension to the student’s transcript. **Extra-curricular** activities are not formally recognised by the university for inclusion in the extension to the transcript.

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