

Towards a Balanced, High Quality Assessment System for the Certification of Achievement at Senior Cycle

A Submission Prepared for the Joint Committee on Education, Further and Higher Education,
Research, Innovation and Science

by

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Executive Summary

There is broad consensus in the research literature that high quality educational assessments are underpinned by a number of key principles. The first is that all assessments should be designed to support accurate (valid), consistent (reliable) and fair decision making about the progress and achievement of learners. The principle that all assessments contain measurement error means that single assessments are a poor basis for making high stakes decisions about learners. In addition, while assessment systems provide information to many stakeholders (including policy makers), learners are the most important users of assessment information and, for this reason, a balance needs to be struck between assessments that support learning and those that measure it. The positive and/or negative consequences that derive from the use of an individual assessment or the implementation of an assessment system must always be considered when making judgements about assessment quality.

These principles underpin arguments outlined in this submission for why the certification of achievement at the end of Senior Cycle needs to be based on the outcomes of a broad range of assessment approaches. Four proposals are made: (1) exams spread out over fifth and sixth year with reduced content that, in time, move from paper-based to computer-based so that the power of digital technology can be leveraged to broaden the scope of what can be assessed; (2) continuous assessments that involve a combination of tasks externally set and marked and tasks assessed by the student's own teacher; (3) the collective judgement of in-school teams of teachers about the achievement of students across the Key Skills Framework for Senior Cycle; (4) an element of student self-assessment contributing to decisions around the grading of some assignments and, in particular, competences associated with the Key Skills Framework. Data from all four modes of assessment should be used for certifying achievement at the end of post-primary education.

The potential for over-assessment and increased workloads/stress for both students and teachers are threats that need to be considered when evaluating the proposals outlined in this submission. Moreover, the current relationship between the Leaving Certificate Examination and the CAO points system poses a formidable barrier to assessment reform at Senior Cycle.

1. Introduction

1.1. My name is Michael O’Leary. I hold the Prometric Chair in Assessment at the Institute of Education, DCU where I also direct the Centre for Assessment Research, Policy and Practice in Education (CARPE). In June 2020 I was appointed by the Minister for Education to the Independent Steering Committee on the implementation of Calculated Grades. Over the past five years I have led a number of large-scale research studies focused on assessment at Senior Cycle. My commentaries and research on assessment have been published in academic journals across Europe, Asia and the US.

2. Assessment Terminology and Principles

2.1. In this written submission I address issues related to **Assessment Options** for certification at Senior Cycle. However, I would like to draw your attention to two issues before I begin to move to the main substance of my paper.

2.2. I use the term, **assessment**, to refer to the process of gathering, recording, interpreting, using and/or reporting information about learning (i.e. the knowledge, skills, attitudes, dispositions we want learners to have) to aid decision-making. All assessments are fundamentally about decision-making of one kind or another. For example, students make decisions about subject choice based on their past exam performance or teachers use questioning to decide who needs help in class. At the system level, a decision to implement a policy such as the Literacy and Numeracy Strategy would have been inspired by the outcomes of national and international assessments.

2.3. It is also important to note that tests and examinations (summative assessments or Assessments of Learning) are just one way of collecting information about learners. Indeed, formative assessments, or those assessments carried out on a daily basis in classrooms, are crucial given that they are designed to support learning as it is ongoing.

2.4. There are at least five principles that I believe underpin high quality educational assessments and assessment systems. These principles are well established in the assessment literature (e.g. Gardner, 2006; Russell & Airasian, 2012), but are worth reiterating here as they may be unfamiliar to non-assessment specialists. They are:

- High quality assessments facilitate highly accurate (valid), consistent (reliable) and fair decision-making.
- Single assessments are a poor basis for making important decisions about learners because all assessments contain (measurement) error.
- Assessment provides information for many stakeholders but learners are the most important users of assessment information.
- A balance needs to be struck between assessments that support learning (Assessment for Learning or Formative Assessment) and those that measure it (Assessment of Learning or Summative Assessment).
- The positive and/or negative social consequences that can result from using an assessment are important to consider when evaluating the merit or worth of an assessment (known in the assessment literature as consequential validity).

3. High Quality Assessment Systems

3.1. If principles serve as the foundation for a chain of reasoning, then our actions within assessment systems should be consistent with our assessment principles in so far as is practically possible. I have drawn on the principles set out in Section 2 to provide a critique of the Leaving Certificate examination system that was in place up to 2019 (see the Appendix on page 7). Here, I wish to focus the Committee Member's attention on how assessment quality at Senior Cycle might be improved to support good decision making while at the same time remaining balanced, useful to stakeholders (especially learners) and consequentially valid.

4. The Use of Teacher Judgement in Assessment for Certification

4.1. Leaving Certificate (LC) assessment has been firmly on the agenda since the National Council for Curriculum and Assessment (NCCA) began its review of Senior Cycle in 2016. Documents detailing the outcomes of the consultation process with teachers, parents and students (see [NCCA.ie](https://www.ncca.ie)) reveal an acceptance that the LC examination system, and especially the traditional (established) LC, needs to be reformed in a way that places less emphasis on written exams each June with: (1) exams being spaced out over the final two years of Senior Cycle and (2) more emphasis on continuous assessment including approaches more apparent in the LC Applied programme (e.g. portfolios). I agree wholeheartedly with both proposals. However, the issue of whether or not the grades awarded to a student at the end of post-primary education should be reflective of their teachers' judgements, in addition to the outcomes of written examinations and externally marked assignments, has not featured strongly in the debate up to now.

4.2. Those of us working in education could never have foreseen the crisis brought about by the cancellation of the traditional Leaving Certificate examinations in June 2020 as a result of COVID-19. The fact that post-primary teachers agreed to be directly involved in assessing their own students for certification purposes that year and again in 2021 seems scarcely believable now given their previous opposition to any idea suggesting such involvement. But has the experience of calculated grades in 2020 and accredited grades in 2021 changed teachers' hearts and minds about assessment? Are teachers more or less likely now to consider playing a part in deciding what appears on the certificate students get at the end of their post-primary education? It will take some time for these questions to be addressed fully but findings from a recent online survey of over 700 post-primary teachers involved in the Leaving Certificate (LC) 2020 calculated grades process are worth considering in the interim.

4.3. As described in a report on the survey (see Doyle, Lysaght & O'Leary, 2021, <https://www.dcu.ie/carpe>), many respondents expressed confidence in their professional judgements with most indicating that they had enough information to reach an informed decision about the most likely mark the majority of their students would have achieved had the examinations gone ahead. While most agreed the process in schools had gone well, decision-making around grade boundaries, reconciling inconsistencies in student performance, maintaining an unbiased position with respect to individual students and the strict application of Department of Education calculated grades guidelines were seen as

particular challenges. Many teachers did not hold back when describing the pressure and stress they felt throughout the process. While many were adamant that they would not engage in a calculated grades process in the future, some took a more nuanced view indicating overall satisfaction with the process in the context of exceptional circumstances and highlighting the potential benefits it offered some students.

4.4. This latter point in particular is worth highlighting. Prior to 2020, personnel representing teacher unions were adamant that teachers did not wish to be directly involved in state exams, arguing that a system of external marking was fairer to students. However, additional analyses carried out on data from the DCU study (yet to be published) suggest that this may not be how all post-primary teachers see it. In this study, over a third of respondents indicated their belief that teacher involvement in assessment for certification purposes would lead to fairer outcomes for the students in their schools. Perhaps even more surprising was the significant minority (almost 30%) who agreed that, as a result of having been involved in the calculated grades process, they felt more positively disposed to being involved directly in assessing their own students for certification purposes. While fully acknowledging the limitations of a study drawing on data from a sample of a relatively modest size, the findings seem significant in that they point to the possibility that there are voices among the teaching body that have not, heretofore, been heard.

4.5. Surely now, given everything that has happened in education since the advent of the pandemic, a conversation about solutions involving teachers in state certification examinations must take place? I don't believe anyone will be arguing for a system of calculated/accredited grades where teachers are the sole arbiters of what appears on a student's leaving certificate. International research showing that teachers tend to overestimate their students' performance in exams and the levels of grade inflation witnessed in Ireland in 2020 and 2021 make this a dubious idea in any event. But what about a teacher judgement element in addition to modified exams and continuous assessments? Would that result in a more balanced assessment system – one where teaching, learning and assessment are better aligned in terms of the aims and aspirations of the Senior Cycle programme? For example, could a system be designed so that a determination about achievement in cross-curricular areas such as communication, creativity, problem solving, collaboration or global awareness has the same standing on a student's certificate at the end of post-primary education as a grade in one of the traditional subject areas? It is hard to argue against the notion that teachers are likely to know more about their students' achievements than any set of examinations can reveal. At the heart of the matter is fairness for students. There is much to learn from the unprecedented experiences of everyone involved in the past two iterations of the LC. If the conversation about the role of teachers in assessment for certification is shut down, then the pandemic will have resulted in an educational crisis wasted.

5. Proposals for Assessment Reform at Senior Cycle

5.1. I wish to focus this section of my submission on four assessment approaches that, if implemented, have the potential to improve on the current system. The first two are variations or extensions of proposals contained in the NCCA Senior Cycle Review

documents, while the third relates to the use of teacher judgements in the context of cross-curricular or transversal skills. The fourth is focused on how an element of student self-assessment might be incorporated into the certification of achievement at Senior Cycle.

5.2. Externally set and marked examinations should count for no more than 50% of final grades in all subjects (remember, single assessments are a poor basis for making important decisions about learners). They should be designed to examine greatly reduced subject content and should take place over the two years of Senior Cycle. The results of those exams taking place in 5th year should be available to students and teachers during the first term of 6th year to ensure that the outcomes can be used for formative purposes (remember, learners are the most important users of assessment information). As soon as possible, all exams should become computer-based so that the full capabilities of digital technology can be leveraged to create questions that use something other than static text. The use of video, virtual reality, interactive images can help in creating exams that assess something other than low-order cognitive functioning. Computer-based exams are also likely to be more highly regarded by today's generation of technologically-savvy young people.

5.3. A limited set of continuous assessments designed to assess the higher-order skills of analysis, synthesis and evaluation should be administered throughout the two years of Senior Cycle (good practice in continuous assessment for the Leaving Cert Applied Programme and Leaving Cert Vocational Programme should be noted here). Some of these assessments could be completed by the end of 5th year with results available in 6th year to support assessment for learning. While, in the short term, it is likely that teachers will want assessments to be externally set and marked, consideration should be given to how some element of this work can be undertaken by students' own teachers. After all, they are in the best position to identify students' strengths and weaknesses (remember, high quality assessments facilitate highly accurate, consistent and fair decision-making). Some inspiration can be drawn from what happened with the LC in 2021 where exams and teacher judgements were given equal status. So, for example, teachers could also be asked to submit ratings of the externally set and marked continuous assessments. In the short term students could be allowed to keep the higher mark, but, over time as moderation procedures to ensure alignment of judgements across schools become embedded and teachers become more confident in their assessment judgements, full responsibility for marking some of the externally set continuous assessments could be given to schools.

5.4. Teacher judgements of achievement across the Key Skills Framework for Senior Cycle especially those pertaining to, for example, Information Processing, Communication, Collaborative Problem Solving, Critical Thinking and Creativity, should be introduced on a phased basis. These should be assessed by in-school teams of teachers who know the student being assessed, e.g. the students' subject teachers and Year Heads. These teacher judgements should be based primarily on data from daily interactions with students. To ensure credibility and academic standing, the grade awarded for the key skills should count for certification purposes in the same way as a grade in say, English, Irish or Maths (remember, consequential validity is important to consider here). It is accepted that learning outcomes/curriculum content would need to be agreed for each of these areas and that some system of moderation would need to apply to ensure fairness across schools.

It is also likely that an extensive pilot of one or two of the areas would need to be conducted in the early phases of implementation.

5.5. Taking a longer term view, some element of student self-assessment should be incorporated into the certification of achievement at Senior Cycle. For example, students could be asked to contribute a percentage of the marks (say 10-20%) towards a grade for some continuous assessments and/or assessments of key skills. The rationale for such an approach derives from the fact that learners are the most important users of assessment information and being able to self-assess is crucial to life-long learning. Moreover, an argument can be made that an assessment system incorporating data from student self-assessments is a more balanced one. I acknowledge that the idea of involving students directly in certification decisions is unusual (even radical) and that research tells us that students are prone to overestimate their grades (e.g. Attwood et al., 2013). However, the idea is democratic and would be a clear expression of trust in our young adults to be responsibly involved in a process that has a major impact on their futures. All of that being said, any initiative involving the high stakes use of student self-assessment data would need to begin at Junior Cycle to ensure that, by the time students reach the final years of their post-primary education, they are competent and confident enough to make accurate, reliable and fair decisions (judgements) about their own achievements.

6. Caveats

6.1. To end, I wish to add some caveats. First, it is important to bear in mind that a more balanced system of assessment does not necessarily guarantee positive consequences. For example, there is a danger of over-assessment in the proposal with the associated danger of increased stress and workloads for both students and their teachers.

6.2. Second, the system of assessment I am suggesting will not, in and of itself, alleviate the difficulties caused by the current relationship between the LC Examination and the CAO points system. It is difficult to envision real reform of assessment at Senior Cycle occurring as long as institutions of higher education (and further education and training) use the LC exam as a mechanism for streamlining the process of how our learners move from one phase of their education to another.

6.3. Finally, as we build on the experiences of the past in trying to improve what we do with assessment at Senior Cycle in the future, a warning contained in the recent OECD publication, *Education in Ireland: An OECD Assessment of the Senior Cycle Review*, is worth remembering:

There is ambivalence in the support that some stakeholders manifest for change, which jeopardises the chance to settle some of the issues acknowledged. Even when convinced of the need for change in senior cycle education, stakeholders tend to disagree on the nature and scope of the change, which makes finding common solutions considerably more challenging.

(OECD, 2020)

Appendix 1

A Short Critique of the Current Leaving Certificate Examination Drawing on Principles Underlying High Quality Assessment Systems

Five principles, well established in the assessment literature, are worth considering when evaluating the quality of any assessment system and here I draw on each to offer a critique of the current arrangements for certifying achievement for the majority of Irish students at the end of their post- primary education. These principles are:

1. High quality assessments facilitate highly accurate (valid), consistent (reliable) and fair decision-making.
2. Single assessments are a poor basis for making important decisions about learners because all assessments contain (measurement) error.
3. Assessment provides information for many stakeholders but learners are the most important users of assessment information.
4. A balance needs to be struck between assessments that support learning (Assessment for Learning or Formative Assessment) and those that measure it (Assessment of Learning or Summative Assessment).
5. The positive and/or negative social consequences that can result from using an assessment are important to consider when evaluating the merit or worth of an assessment (known in the assessment literature as consequential validity).

While the LC examination system has many strengths, we should be careful about holding it up as a paragon of accuracy, consistency and fairness. There are very good reasons why efforts to reform it are underway. The reality is that there is no ultimate truth in a LC result (or the outcomes from any assessment for that matter) because each exam cannot measure all elements of a subject area. As a consequence, every educational assessment contains what is called *measurement error* (which also accounts for some of the variation in rankings). It is analogous to the idea of the *margin of error* (e.g. $\pm 3\%$) in opinion polls that involve a sample rather than all possible respondents. There are also the myriad factors that affect student performance on the day of an exam, e.g. misreading a question, not feeling well etc. And yet we persist in making important decisions about what we will allow our young people to do in terms of pursuing further studies on the basis of one-off exams in June. It is true that many LC subjects are partly assessed using approaches other than written exams, but it is worth remembering that there are at least a dozen subjects where 100% of the grade awarded is down to a single exam (e.g. English, maths, applied maths, physics, chemistry, biology, economics, business and accounting). For many others, the final grade is heavily weighted in favour of the one-off written exam e.g. history and geography.

The LC is fair in so far as everyone takes the same test and under the same conditions that include anonymous marking. The public has confidence in the system and that is important. However, students do not arrive at the testing centres with nothing but ability and a track record of diligent study separating them. Some had better teachers than others and some were able to avail of the benefits that economic advantage bestows e.g. grinds. Indeed, so many of the problems faced by students in 2020 and 2021 in terms of having access to technology, having a quiet space at home to study and so on, have been relevant to the LC **fairness** issue long before the arrival of Covid-19.

In terms of teaching and learning, it has been well flagged in multiple studies conducted at Senior Cycle that the current LC examination system dominates the final two years of post-primary

education (e.g. see, <https://www.esri.ie/news/as-leaving-certificate-and-leaving-school-looms-teenagers-participation-in-cultural-activities>). The focus on exam outcomes and CAO points narrows the curriculum to the extent that anything not likely to be on the exam is considered superfluous. The problem of rote learning and its corollary, a lack of engagement with higher order, critical and creative thinking skills are other **negative consequences** highlighted by many commentators (e.g. McManus (2018; Baird et al., 2016). A research study conducted with undergraduate students at the end of their first year in DCU indicated that the majority of participants did not regard the LC Programme (Senior Cycle) as having been a good preparation for higher education (O’Leary & Scully, 2018).

Moreover, the public focus on the content of LC papers in June and on the LC results when they are issued in August of each year is another **social consequence** of what some have referred to as a national obsession with the exam. We are so familiar with the behaviours associated with this obsession in Ireland that it comes as a surprise to learn that in most other countries the state exams pass by without undue public fuss. External observers marvel at how the link between the LC exam and the CAO points system and the “race” for places at third level consumes acres of news print every Summer (Baird et al. 2016). All of this attention does little to reduce the stress felt by students prior to and during the examination period. The finding from research conducted at Maynooth University in 2020 following the cancellation of the LC exams that “a substantial proportion of students reported a strong sense of relief and lower levels of reported stress and anxiety” is worth noting (Quinn et al., 2020).

The **negative consequences** of distilling all learning at Senior Cycle down to a number – a CAO points total – are many, but **the lack of balance** in how assessment functions at Senior Cycle is an important one to consider. It is well known that when summative assessment dominates, the role of formative assessment in supporting day-to-day teaching and learning tends to be diminished as priority is given to “exam content coverage” rather than to ensuring learning is taking place. And when that happens, the assessment information needs of learners play second fiddle to the assessment information needs of the system.

In Ireland, it could be argued that the assessment information required to aid decision-making focused on moving learners from post-primary into higher and further education has been paramount. Moreover, the teachers’ familiarity with the traditional LC exams is so ingrained and the streamlined system put in place by the State Examinations Commission to administer and mark them is so efficient and well organised that efforts to effect change at Senior Cycle have often been stymied or supported with little enthusiasm. This is certainly the view expressed in a recent publication entitled *Education in Ireland: An OECD Assessment of the Senior Cycle Review*: “Even when convinced of the need for change in senior cycle education, stakeholders tend to disagree on the nature and scope of the change, which makes finding common solutions considerably more challenging” (OECD, 2020)

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