## 2 September 2020

Ms Norma Foley, T.D., Minister for Education and Skills, Marlborough Street, Dublin 1.

# 1st Letter of Opinion regarding the Calculated Grades System

### Dear Minister

# 1. Establishment and Role of the Independent Steering Committee

As you are aware, the Independent Steering Committee on Calculated Grades was established in June, by the then Minister for Education and Skills, to oversee the process of implementation of calculated grades from the perspective of quality assurance and integrity. The Committee's remit relates only to the outcomes of the calculated grades system.

The members of the Steering Committee are:

- Dr Áine Lawlor (Chair)
- Dr Peter Archer
- Mr Justin Edwards
- Mr Joe Hamill
- Prof Michael O'Leary
- Ms Majella O'Shea

The specific role of the Committee, as set out in its terms of reference, is to seek to provide assurance to you, as Minister, of the quality and integrity of the outcomes of the calculated grades system, including by satisfying itself as to the fairness and accuracy of the outcomes following the national standardisation process. This assurance is to be provided in the form of two Letters of Opinion – the 1st immediately prior to the issue of the results of the calculated grades and the 2nd immediately prior to the issue of appeals outcomes on calculated grades.

In fulfilling its role, the Committee has held 16 meetings to date and has met with a range of officials and experts involved in the implementation of the calculated grades system (list at Appendix 1). The Committee would like to record its appreciation to all involved for their positive and co-operative engagement – especially the officials from your own Department and the Calculated Grades Executive Office (CGEO) – and to thank them for their assistance. It would also like to acknowledge the commitment, dedication and balanced judgement shown by them throughout the process for the purpose of ensuring that the calculated grades system would operate as effectively and fairly as possible for the benefit of the 2020 cohort of students.

It may be noted that, in the course of carrying out its role, the Committee formally recorded that there were no conflicts of interest arising on the part of any of its members. The Committee also adopted a Protocol on Security and Confidentiality in regard to all matters coming before it in the course of its work.

## 2. Context and Underlying Principles

In approaching its task, the Committee was aware of the exceptional situation that had been created due to the Covid-19 pandemic, which led to the decision by the then Government to postpone this year's Leaving Certificate Examination and replace it with a system of calculated grades based on the professional judgements of teachers. Your Department and its advisors identified the need for standardisation of the estimates submitted by schools and, at an aggregate level, to address the likelihood of over-prediction leading to inflated grades when compared to other Leaving Certificate cohorts. If teacher predictions were to be the sole criterion, the 2020 results could be called into question due to a potential difference in outcomes to those observed previously. The documentation describing the system included a commitment that the calculated grades will have the same status and be of equal standing and currency value to the previous and future Leaving Certificate grades, and can be used to allow students to progress from second-level to follow whatever pathway they choose, whether it be to further study or to the world of work. In addition, three further public commitments were made regarding the use of data in arriving at individual student outcomes. These were that:

- historical data at the individual level would not be used deterministically to constrain estimates of student performance;
- historical data at the school level would not impose an upper limit on the calculated grade possible for an individual student; and
- the class level rank ordering of students specified by teachers would be maintained throughout the process of calculating grades.

The Committee wishes to acknowledge the significant work that has been carried out, under unavoidable time pressures, in developing a system for the purpose of providing students with fair and accurate results that will enable them to 'move on with their lives' and progress to employment, further or higher education, or training/apprenticeship. The Committee noted that all of this work was informed by the consultation processes that were undertaken with the various stakeholders and education partners, including through the National Advisory Group for Contingency Planning for State Examinations – processes that led to a widely shared acceptance that, while the calculated grades system is not a perfect solution, it is arguably the best and fairest alternative available in the present exceptional circumstances. The Committee is cognisant also of the significant challenges inherent in operating a complex model that seeks to combine estimated marks and class rankings for students, provided by teachers on the basis of their professional judgement, with a national standardisation process for the purpose of seeking to ensure that:

- fair and accurate calculated grades can be produced for circa 61,000 Leaving Certificate students across more than 440,000 individual grades; and
- the calculated grades will have equal status with previous and future Leaving Certificate grades.

The Committee is aware that those involved in the development of the technical process underpinning the calculated grades system drew on a wide body of appropriate research literature. While, by definition, there is no specific research that relates to how such a system might operate in the current circumstances, the use and accuracy of predicted results and class rankings by teachers is well researched and documented. In essence, such judgements by teachers can result in under- or over-estimations, leading to the need for an element of adjustment to ensure fairness and accuracy. Hence, there was a rationale for including teachers'

judgements in combination with standardisation as the key elements in the calculated grades system.

In the course of its work, the Committee sought at all times to keep in mind the perspective of students, their parents and guardians, and teachers, and the importance to them of every effort being made to ensure that the outcomes of the calculated grades system would deliver the fairest and most accurate results possible. It also maintained a focus on the key principles that were prescribed for it in its terms of reference. These principles, and the broad approaches adopted by the Committee to help inform its deliberations, were as follows:

- Quality and Integrity: Was all reasonable effort made to ensure that the quality and integrity of the work undertaken was the best achievable given the time and resource available?
- **Accuracy:** Was the approach to the implementation of the calculated grades and standardisation processes sufficient so as to (a) provide valid and reliable outcomes and (b) result in reasonably comparable outcomes to those that would have been achieved had the system operated as normal?
- Fairness: Did the implementation of the calculated grades approach create any new advantage or disadvantage in comparison to the system had it operated as normal and, if so, were all reasonable efforts or steps taken to mitigate such advantages or disadvantages within the constraints of the time and the calculated grades system as devised?

# 3. Key Areas of Focus

The Committee decided at an early stage that it should adopt a small number of key areas of focus that would guide its deliberations. These were:

- Communications
- Data Management and Governance
- Out-of-School Learners and Subjects Studied Outside of School
- The National Standardisation Process

The following sections deal with each of these areas of focus in turn.

## 4. Communications

The Committee focused in particular on written communications with key stakeholders, including students, parents and guardians, schools and the general public.

The Committee also noted the consultation process undertaken with the education partners in terms of communicating the circumstances in which the decision was made to implement a calculated grades system in 2020.

The Committee reviewed a wide range of communications issued by your Department, including guidance documents, circulars and press releases, all of which were accessible in one place via the Government Leaving Certificate 2020 portal <a href="http://gov.ie/leavingcertificate">http://gov.ie/leavingcertificate</a>. The Committee also noted the instructional videos that were uploaded, and the radio/advertising campaigns conducted in May and July, as well as the helpline for students operated by the CGEO and the arrangements for dealing with emails from students on an individual basis.

In carrying out this phase of its work, the Committee had regard to a range of criteria, including that the communications were: timely; accessible; understandable to the public at large; open and transparent; effective; and responsive where required.

The Committee noted that the intention from the outset was that the calculated grades results would be made available as close as possible to the traditional date. While conscious of the fact that there was some level of disappointment that the results would issue on 7 September, the Committee, drawing on the information available to it, observed that this date reflects a reasonable timeframe comparable to that which occurred in other jurisdictions that adopted a similar calculated grades approach.

Being mindful of events in those jurisdictions, the Committee, in a spirit of support, offered a number of comments to your Department in regard to communications issues. In particular, it stressed the importance of improving understanding of the calculated grades model by ensuring the widest possible sharing of information with students, parents/guardians, teachers, and the general public in advance of the issuing of results on 7 September.

# 5. Data Management and Governance

The Committee was very conscious of the challenge involved for the CGEO in collecting the required data from schools, combining them with relevant historical data, and producing outcomes, by using a national standardisation model, that would be: fair and accurate; properly aligned across schools and with the national standard; and of an equal standing and status with previous and future Leaving Certificate grades. The complexity of the data management requirements is reflected by the fact that the process involved 786 schools/centres, some 61,000 students and over 440,000 individual subject level entries.

## The Committee looked for two essential requirements:

- assurances that the necessary arrangements were in place to ensure compliance with all relevant legislation, particularly regarding data protection and data security; and
- evidence of rigorous compliance with robust data management and governance protocols through all stages of the process, including:
  - compilation of quality data by the schools;
  - accurate transmission of that data to the CGEO;
  - implementation by the CGEO of robust methodologies and security protocols for the sharing of that data for standardisation purposes; and
  - ensuring the effectiveness and integrity of the systems put in place for combining historical data with the schools' data.

### In terms of data management, the Committee noted that:

- comprehensive guidance was provided to assist schools in providing their students with the fairest possible estimate of their performance in the Leaving Certificate;
- schools were required to return their data to the CGEO via an online data collection system, while checks and balances in the process sought to ensure that the data were entered correctly and accurately;
- a quality assurance process was carried out by the CGEO on receipt of the school data and in subsequent processing; this included a sampling of completed paperwork from

30 randomly selected schools to ensure that the data had been input correctly and that the stability and integrity had been maintained, including the throughput of the estimated marks and the rank order;

- all of the school data were processed by the CGEO within the statistical system developed for it by an international company, Polymetrika International Inc (PII), with particular expertise in this area; and
- the Educational Research Centre (ERC) provided a data quality assurance and verification service on both the data processing and standardisation processes.

The Committee reviewed the relevant documentation relating to data management and governance, covering areas such as:

- data collection and processing systems;
- data protection and data security arrangements;
- identification of data risks;
- approaches adopted for data checking and reconciliation; and
- high-level data flows and process mapping.

The Committee also held comprehensive discussions with lead personnel regarding the key aspects of the data management regime.

6. Out-of-School Learners and Subjects Studied Outside of School

This area of focus encompasses:

- Students who are entered for the Leaving Certificate Examinations 2020 as external candidates and who indicated that they were not attending for tuition at any school, centre or private college, recognised by the State Examinations Commission (SEC) for the purposes of holding examinations. These students are referred to as independent learners or out-of-school learners in the calculated grades process.
- Learners who have enrolled in a school on a full-time basis but are studying one or more extra subjects outside of school.

The Committee was conscious of the challenge of providing calculated grades to these categories of learners in a way which is fair to students and does not undermine the integrity of the overall approach. It was noted at the outset, by the CGEO, that it would not be possible to provide a calculated grade for all students in these categories.

The Committee looked for evidence of the efforts that were made by the CGEO to provide calculated grades to as many students as possible, provided that there was credible, satisfactory evidence from an appropriate source, on which an estimated percentage mark could be based. The Committee reviewed relevant documentation and methodologies in considering these matters, including:

- the CGEO's guides for out-of-school learners and for subjects studied outside of school:
- reports from the CGEO;
- results of the standardisation process; and
- the High Court Judgement delivered on 19 August 2020.

The Committee noted that comprehensive guidance was provided to out-of-school-learners through the *Guide to Calculated Grades for Out-of-School Learners* and to schools for students studying subjects outside of school through the *Guide for Schools on Providing Estimated Percentage Marks and Class Rank Orderings*.

Out-of-school learners had to apply directly to the CGEO for calculated grades. Students in this group who were slow to apply to be considered for calculated grades were contacted by the CGEO to confirm whether or not they wished to do so. The processing of these applications involved contacting the teachers, tutors or centres of learning, nominated by the student to provide an estimated mark on their behalf.

In cases where a student was attending school, but studying one or more subjects outside of school, school principals were asked to make every effort to provide an estimated mark for that subject(s), provided there was sufficient, credible evidence available from an appropriate source. If the principal was unable to provide an estimated mark for any student, they were asked to notify the CGEO, which conducted a review of these reports with the schools involved, to ensure that the correct procedures were followed and that as many students as possible received an estimated mark for any subject(s) studied outside of school.

Where it was deemed not possible to provide a calculated grade in a subject(s), to either an out of school learner or a student studying a subject outside of school, the students were contacted by the CGEO to inform them of this decision. These students were afforded the opportunity to appeal the decision. If students remained dissatisfied, they had recourse to an independent appeal scrutiny process.

The Committee also noted the Judgement of the High Court dated 19 August 2020 in the case of a student who had been educated at home and had intended to sit the 2020 Leaving Certificate examinations. The student had sought a judicial review of the decision of the Department to refuse him calculated grades on the grounds that he was being taught by a parent, who was a registered teacher, but who as a close relative was considered to have a conflict of interest in terms of awarding estimated percentage marks to him. The Committee noted that the Court found that the Department's refusal to provide a calculated grade in circumstances where the applicant is home-schooled and the applicant's parent is a registered teacher and thus has a conflict of interest, is arbitrary, unfair, unreasonable and contrary to law. The Committee further noted that, on foot of the Judgement of the Court, the Department was, on a without prejudice basis, putting in place a process, as a matter of urgency, to arrange for non-conflicted or independent teacher(s) to consider the available evidence for the purpose of provided estimated percentage marks in respect of each of the student's Leaving Certificate subjects. The same arrangements are being put in place for other home-schooled students in identical circumstances. At the time of writing, the Committee is aware of other legal cases pending.

In carrying out this phase of its work, the Committee had regard to a range of criteria, including that:

- information for learners, and for schools/teachers, where appropriate, was timely and clear;
- the highest possible number of learners was included in the calculated grades process and received a calculated grade; and

• where calculated grades could not be issued the reason was clear and communicated to the students concerned.

To ensure that the process for out-of-school learners was as fair as possible, the CGEO followed up with these students in an effort to ensure that as many as possible were included in the calculated grades process. In cases where it was not possible to accept an estimated percentage mark, students were informed of the decision by letter, and that they had the right to appeal this decision. At the time of writing this appeals process is ongoing.

In relation to subjects studied outside of school, the CGEO undertook a review with schools to confirm that they had followed the process correctly and had made all reasonable efforts to obtain satisfactory evidence on which to base an estimate. Following this review process, the CGEO communicated the outcome with schools and students so that any student who would not receive a calculated grade in a subject was aware of this as far as possible in advance of the issue date for results. Students were also informed that they could access an appeals process.

#### 7. The National Standardisation Process

The Committee understands that its remit relates only to the outcomes of the calculated grades system and that it has no mandate to examine the design of the system itself.

On foot of the decision of the then Government in May 2020, the intention was that calculated grades would be awarded following a standardisation process using 4 sets of data to ensure equitable treatment of candidates in each subject and at each level:

- the estimated marks and ranking of students supplied by schools to the CGEO;
- Junior Cycle examinations performance of the class of 2020 in each school based on their collective performance;
- the historical school distribution, based on Leaving Certificate Examination performance at the school level across three prior years and related Junior Certificate/Cycle examinations performance for each of these years; and
- the historical national distribution of student results on a subject by subject basis based on historical Leaving Certificate examination performance.

From the outset, it was accepted that different sources of data would have to be used in a flexible way to process students' estimated marks through the standardisation process. The Committee understands that, following each iteration of the standardisation model, the effects and impacts were rigorously assessed by the National Standardisation Group (NSG). In so doing, the NSG was seeking to achieve fair and just representations of student performance that would reflect the most likely outcome of the Leaving Certificate had the students undertaken the traditional examinations.

The Committee was aware of the unfolding events in mid-August in other jurisdictions that used the calculated grades approach. We saw that the use of school-by-school historical data had been criticised in the public discourse. It led to accusations that students attending disadvantaged schools were at risk of being unfairly treated or subjected to "a post-code lottery" or "school profiling". The Committee noted the consequent loss of public confidence in the standardisation process and in the results issued by the authorities in those jurisdictions.

The Committee is also conscious that there has been criticism in the public discourse in our own country of the application of the more general principle that the judgements of schools be

adjusted so as to rigidly maintain year-to-year comparability in the national standard of the examinations.

The Committee has been fully appraised of the proposals brought by you, as Minister, to Government on 1 September: that while the need to align standards across schools to the greatest degree that is feasible and defensible remains, the need to also align those standards to the examining standards that have applied in preceding years, and will apply in subsequent years, should be accorded a diminished importance. This will necessarily affect the degree to which the historic national standard distribution of student results on a subject-by-subject basis are relied upon within the standardisation process.

The Committee notes that it has been decided by Government that the fairest basis on which to generate calculated grades will use the standardisation model which:

- does not include school-by-school historical data on the Leaving Certificate performance of students in past cohorts in each subject; and
- sees a minimal reliance on the historical national distribution of student results on a subject-by-subject basis.

The Committee has also been informed that, in making these changes, greater emphasis has been placed on the schools' estimated marks and consideration has been given to: the effects and impacts of the iterations of the standardisation model; the need to ensure equity and fairness to students; the importance of ensuring that students from disadvantaged backgrounds are not treated unfairly; and the experiences in other jurisdictions where versions of calculated grades have been transacting.

As the Committee has already highlighted, research on teacher predictions about exam performance suggest they will often over-estimate, and sometimes under-estimate, their students' actual results. This provides the rationale for a national standardisation process that seeks to adjust teacher judgements so as to ensure equity and comparability in standards across contiguous years. The Committee recognises that throughout the calculated grades process an appropriate balance had to be struck between the maintenance of such a national standard and the adjustment of over- or under-estimation by teachers, in the fairest way possible.

The Committee further recognises that in furtherance of the Government's commitment to maintaining a sense of fairness and its consequential decision to amend the national standardisation process, a less strict application of the original standardisation model was introduced. While this means that results will be considerably stronger overall than in previous years, with different effects being seen across various subjects and levels, standards were maintained proportionate to the sense of fairness for all. In the context of ensuring fairness, the commitment that stronger performing students in traditionally lower-performing schools can attain beyond the normal range of grades was reflected in this approach.

In terms of the stronger performance in 2020, the Committee accepts that equity in standards and accuracy are not the only issues that matter here. It notes the commitment, as endorsed by Government, to ensuring equity for the Leaving Certificate class of 2020, adopting an approach to standardisation that places the students above the system, while allowing as much comparability as possible to other years.

As previously noted, the Committee's remit relates only to the outcomes of the calculated grades system and not to the design of the system itself. In setting out its opinion in paragraph 9 below, therefore, the Committee has sought to remain focused, in line with its terms of reference, on the quality and integrity of the outcomes of the calculated grades system,

including the fairness and accuracy of those outcomes following the standardisation process as now defined.

## 8. Sources of Assurance

The Committee, prior to finalising its opinion in regard to the quality and integrity of the outcomes of the calculated grades system, took account of a number of other sources of assurance contained in the following reports submitted or made available to it:

## i. Reports from the CGEO:

The Committee received frequent reports, both oral and written, from the CGEO during the course of its work. These reports provided clarifications and positive assurances to the Committee regarding matters that it raised.

# ii. Reports from the NSG:

The Committee received two written reports from the NSG – a Preliminary Report dated 27 July and a Final Report in draft format dated 2 September. The Committee commends the NSG on the clarity and comprehensiveness of its reports and wishes to record its appreciation of the attention paid to ensuring that every aspect of the work was documented and communicated to us.

The Committee has paid particular attention to the view of the NSG that the statistical model used to produce the final set of calculated grades is fair and defensible in the context of the constraints that apply. While the process has produced a considerably stronger set of results than those of the recent past, the Committee notes the hope expressed by the NSG that stakeholders will accept the systemic benefits of according these grades the same value as those obtained in any other year.

# iii. Final Report from the ERC to the CGEO:

The Committee has noted the ERC Report on LC2020 Data Verification, which was submitted to the CGEO on 2 September 2020. The report summarises the ERC's data verification and quality assurance activities in the context of its role to provide assurances that the results for Leaving Certificate 2020 candidates are of "high quality and integrity, and free of error relating to data transfer, or other data processing steps". The Committee notes that ERC has verified and confirmed that all pre-model data have been correctly executed and that the input data for the model are correct. Overall, the ERC has commended the CGEO on the extremely high data quality. The Committee notes the ERC's statement that, at the time of writing, a small number of checks remain to be signed-off.

## iv. Statement of the External Reviewer:

An independent expert, Dr Janet Brown, former Chief Executive Officer of the Scottish Qualifications Authority, was appointed by your Department to fulfil a role as External Reviewer of the system of calculated grades and provide overall validation on the model. The 1<sup>st</sup> Statement of the External Reviewer has been made available by your

Department to the Committee in furtherance of its governance role. The Committee notes the conclusions of the Reviewer as follows:

- It is evident that the provision of calculated grades for the Leaving Certificate 2020 has been approached from the perspective of fairness and a concern for the learner
- There was significant research conducted to gain an understanding of the nature of the challenge both from the aspect of teacher assessment but also from that of the challenges of statistical modelling
- The approach was well planned with key elements being focus on governance and decision making; data integrity and validation; and oversight and challenge; and responsiveness and flexibility
- The implementation has demonstrated the effectiveness of level of planning, the importance of continuous review and the commitment of those involved.

# 9. Overall Opinion of the Independent Steering Committee

The Committee has already acknowledged the commitment, dedication and balanced judgement shown by all parties to ensure that the calculated grades system has been underpinned by the principles of teacher professionalism, support for students, objectivity, fairness and equity, collaboration and timeliness.

In relation to Communications, the Committee is of the view that the suite of communications issued by your Department have met the relevant criteria and have satisfied the essential requirement of communicating the necessary information to the key stakeholders.

In relation to Data Management and Governance, the Committee is satisfied that every effort was made to ensure that data was treated appropriately through all stages of the process; that data risks were identified and managed; and that system checks and validations were identified, developed and implemented throughout the system.

In relation to Out-of-School Learners and Subjects Studied Outside of School, the Committee, having regard to the unavoidable constraints and time pressures arising from the Covid-19 pandemic, as well as the complexity of the calculated grades model, is of the view that your Department has taken reasonable steps to ensure that the best outcome was achieved by the highest possible number of learners.

Having considered all the information made available to it, including the reports and briefings it has received and the responses provided to its requests for additional clarity or explanation, the Committee has formed the view that the outcomes of the calculated grades system were the best achievable, given the time and resources available, as well as the need to respect the public commitments that were made, including the commitment to maintaining a sense of fairness. The Committee is satisfied, accordingly, that those outcomes have met the threshold of demonstrating the requisite level of quality and integrity.

In terms of accuracy and fairness, the Committee is satisfied that the requisite standards were met in terms of the outcomes delivered following the national standardisation process. In forming this view, the Committee has taken particular account of the outcomes in relation to:

- DEIS schools
- gender; and

• subjects with small cohorts within schools/centres and new subjects.

The Committee has noted that there has been no overall increase in the gap between DEIS schools and non-DEIS/other schools. In regard to gender, the Committee understands that girls continued to outperform boys, on average, across subjects and to an extent larger than seen in previous years. However, as the standardisation model does not control for gender, it would appear that the increase in the current year is predominantly attributable to the school estimates conferred on students. In regard to subjects with small cohorts within schools/centres, and new subjects, the Committee discussed these issues with the NSG and is satisfied that the methodologies applied were reasonable and consistent with good practice in similar contexts.

Having regard to the foregoing, the Committee considers that it has been demonstrated sufficiently that valid and reliable outcomes were achieved which are reasonably comparable to those that would have been achieved had the examinations taken place. In expressing this opinion, the Committee notes it had a considerable level of interaction with the NSG in regard to issues of validity. While the NSG acknowledges that it was not feasible to carry out a number of potential validity checks due to time constraints, the Committee is satisfied that the checks that were carried out addressed the priority areas identified for validation purposes.

Taking account of the decision made to ensure equity for the 2020 Leaving Certificate cohort, the Committee is satisfied that all reasonable efforts were taken to mitigate advantages or disadvantages within the constraints of the time and the calculated grades system as devised.

In conclusion, the Committee supports the recommendation of the NSG that the results be submitted to you, Minister, for approval of their issue to students.

# 10. Concluding Comments

This letter of opinion is being submitted subject to there being no major changes or developments regarding the calculated grades system prior to the date of issue of results. The Committee looks forward to presenting its 2nd Letter of Opinion, immediately prior to the issue of appeals outcomes on calculated grades.

Finally, the Committee wishes to again acknowledge its appreciation for the support provided to it by your Department, including the CGEO. The Committee wishes to express its special thanks and appreciation to Ms Gráinne Cullen, Principal Officer, and Mr Pádraig Manning, Administrative Officer, who provided guidance and support of the highest calibre to the Committee during the course of its work.

At a personal level, I wish to extend sincere gratitude to my colleagues on the Independent Steering Committee. Their generosity of spirit in working collaboratively, sharing their experience and expertise, was evidence of their dedication and commitment to the task entrusted to us.

Yours sincerely

Dr Áine Lawlor

Chair

# Appendix 1

# Parties met by the Independent Steering Committee in the course of its work

Dr Fernando Cartwright, Polymetrika International Inc (PII) Dr Jude Cosgrove, CEO, Educational Research Centre Andrea Feeney, Director, Calculated Grades Executive Office (CGEO) Dr Harold Hislop, Chief Inspector, Department of Education and Skills (DES) Hugh McManus, Assistant Director, CGEO Keith Moynes, Assistant Secretary, DES Miriam Sheerin, Head of Data Management and Governance, CGEO Elaine Sheridan, Assistant Director, CGEO

Dalton Tattan, Assistant Secretary, DES