

# Setting and Maintaining Standards in the State Examinations

## Introduction

Our role in the State Examinations Commission is to provide a high-quality state examinations and assessment system incorporating the highest standards of openness, fairness and accountability. As part of our remit, we are responsible for maintaining examination standards from one year to the next. We strive to achieve this through the procedures that we use for preparing examination papers and other test instruments, and through the quality-assurance procedures that we implement during the marking process.

All of our examinations are prepared in accordance with the principles outlined in the document, *The Preparation of Test Items – Principles and Protocol*, which is available on our website at [www.examinations.ie](http://www.examinations.ie), (under *About us...Publications*). More detail about how those involved in preparing examination papers go about their work is given in the *Manual for Drafters, Setters, and Assistant Setters*, which is available on the same web page. Just as with the preparation of the examination papers, the marking of the work of all candidates is underpinned by the key assessment principles of validity and reliability, and the overarching principle of fairness that is inherent in both of these principles.

## Establishing Standards

Standards are established for new subject specifications in Ireland well in advance of the first examination. The approach taken is sometimes described as a “college of professionals” approach. First, a group of people who have an expert knowledge of what the students should be able to achieve in the subject reach a consensus regarding the *content standards* of the course. This is achieved through the various committees of the National Council for Curriculum and Assessment.

Following this, we in the State Examinations Commission put these *content standards* into effect as a set of *performance standards*. Once these performance standards have been tested, reviewed and fully established, we then seek to ensure that the standards remain consistent over time. We do this through the systems that we use to set valid and reliable examination papers and through the standard-setting procedures that we employ during the marking process.

## Maintaining Standards

Examination systems around the world use a range of different methods for setting and maintaining standards. Some of these methods involve trying out the examination questions before the ‘live’ examination session. If the questions are tried out with a large enough group of students in advance, statistical methods can be used to combine a selection of these questions into a test that has an accurately known level of difficulty. Examples of where this method is used include the development of the “standardised tests” of reading and mathematics that many children take during their time at primary school, and international assessment programmes like the *PISA* assessment. Without this kind of pre-testing and analysis, it is not possible to judge *precisely* how difficult any particular

question or examination will be for the candidates taking it, no matter how carefully the questions are prepared.

Like most other examining boards involved in high-stakes national examinations, we do not pre-test our examination papers in this way, due to concerns about the security of the questions. Consequently, inevitable fluctuations will arise in the difficulty of questions from one year to the next. If we did not take account of these fluctuations, grades would be easier to gain in one year than in another.

In this context, (that is, without pre-testing the questions) maintaining the same standard from year to year has to involve a process that happens after the examination, once the actual performance of the candidates on the questions has been analysed. Whatever adjustment is then required can be achieved in one of two ways. Either the grade boundaries can be moved or the marks can be adjusted in some way in order to ensure that the candidates who deserve a particular grade fall between the relevant boundaries. If the system involves changing the marks, this can either be done using a mathematical formula that transforms 'raw marks' into 'scaled marks', or by making adjustments to the marking scheme so that the raw mark itself is changed. Whatever method of adjustment is used, the decisions in most examination systems about what if any adjustments should be made will be based on a combination of statistical information and experts' judgements of the standards.

It is important to note the following feature of examinations that measure the attainment of large numbers of candidates in a given subject: while the levels of attainment of such large cohorts of students may change gradually over a long time, they will not change radically from one year to the next, unless there has been some significant intervention in the system. We should therefore not expect to see the grades fluctuating widely from one year to the next. When examination systems use this principle in their standard-setting procedures, comparing the attainment of different annual cohorts using a combination of statistics and expert judgement, this is referred to as 'attainment-referencing'.

The standard-setting system that we use for the state examinations in Ireland has in common with other systems its basis in attainment-referencing and the fact that expert judgement and statistics are both used. However, our system uses a different method from most other systems, because our grade boundaries are fixed and we do not apply standardising transformations to raw scores. Instead, the primary mechanism used for dealing with fluctuations in the difficulty of the examination is the marking scheme. The approach is as follows:

- The marking scheme prepared in advance of the examination is a draft, and is expected to remain fluid until the standardising process is complete.
- After the examination, the chief examiner and senior examining team review a selection scripts, consult widely, and consider comments and observations received from relevant professional bodies (such as subject teacher associations) and other stakeholders. They may make preliminary adjustments to the draft marking scheme.

- All examiners attend a training conference at which they are trained in the application of the draft marking scheme.
- The examiners then all select a systematically specified sample of scripts, and mark them in accordance with the draft scheme. They send in data on the marks achieved overall and within each question and send the scripts to their advising examiners for monitoring and review.
- All of the data from all of the examiners is collated and analysed by the Chief Examiner and the senior team. They also consider any unforeseen issues that may have arisen, and make qualitative assessments of the standard of work encountered.
- If necessary, the draft marking scheme is adjusted, so as to ensure that the combined effect of the examination paper and marking scheme for this year represents a comparable standard to that of previous years. The final decisions on the marking scheme are made by the Chief Examiner, informed by the expert views of the senior examining team and the statistical analysis.
- In most cases, marking schemes are finalised at this point. However, changes may occasionally occur at a later stage of the marking process if further relevant information becomes available. All amendments to the marking scheme are applied to the work of all candidates, including those whose work has already been marked.

The marking schemes in each subject are published shortly after the issue of the provisional examination results in August and in advance of the viewing of their scripts by candidates. These are issued to all schools and are available to download from our website.