

# A framework for assessing qualifications

## Introduction

Qualifications that are fit for purpose should reflect developments in knowledge, culture and technology; they must meet the educational needs of students; they must be within the operational capacity of schools and colleges; and they must be valued by schools, colleges, universities and employers. Attempts at reform may fail because they address some of these requirements but neglect others. The unintended consequences that result can undermine the good that the reform is trying to achieve.

A recent example is the so-called ‘GCSE resits’ policy. In 2014, a new condition of funding for post-16 education in England was introduced, which required students who attain grade 3 (formerly grade D) or below in GCSE English and/or Mathematics to resit these qualifications, or take an approved stepping-stone qualification, until they achieve a grade 4 or above. The reform was introduced with the best of intentions: to ensure that as many students as possible achieved the GCSE qualifications that are considered vital for progression in education and employment. However, by 2019 the Royal Society’s Advisory Committee on Mathematics Education (RS ACME) was consistently receiving reports that the reform was causing significant problems, while the number of students who were benefiting was relatively small.

This is an important issue affecting many schools, colleges, further education and skills providers, and hundreds of thousands of students, so RS ACME set out to consider possible alternatives, as part of its longstanding interest in 14 – 19 mathematics pathways. As the work progressed it became clear that analysis of what is a complex problem required a comprehensive framework; one that is holistic, that takes into consideration the perspectives of different stakeholders, and is open about the nature and reliability of the supporting evidence.

It also became apparent that such a framework would have wide applicability. In principle, it would be useful for the development or evaluation of many qualifications reforms, not just GCSE resits. RS ACME felt that it would be helpful to publish the findings and this report sets out the results of the project. It discusses the underlying principles, in particular the need to be holistic, balanced (in its consideration of different viewpoints) and open (about the range and quality of evidence available). It identifies four main stakeholder groups and sets out the key issues that apply to each of them. For each group it poses a set of questions and identifies the evidence that would be needed to answer those questions. Finally, it brings all this together in a comprehensive framework.

A separate Working Paper, available at [royalsociety.org/gcse-mathematics-resits](https://royalsociety.org/gcse-mathematics-resits), demonstrates the application of the Framework to GCSE Mathematics resits policy, sets out conclusions and suggests some ways forward.

# 1. Principles

The Qualifications Assessment Framework (hereafter the Framework) is designed to support an evidence-informed approach to assessing qualifications. It aims to be:

- comprehensive in its recognition and coverage of key priorities;
- balanced in recognising that different forms of evidence can be brought to bear, including statistical evidence, expert judgement, survey data, statutory guidance, and professional experience; and
- open in recognising the sources and reliability of the supporting evidence and seeking to minimise bias.

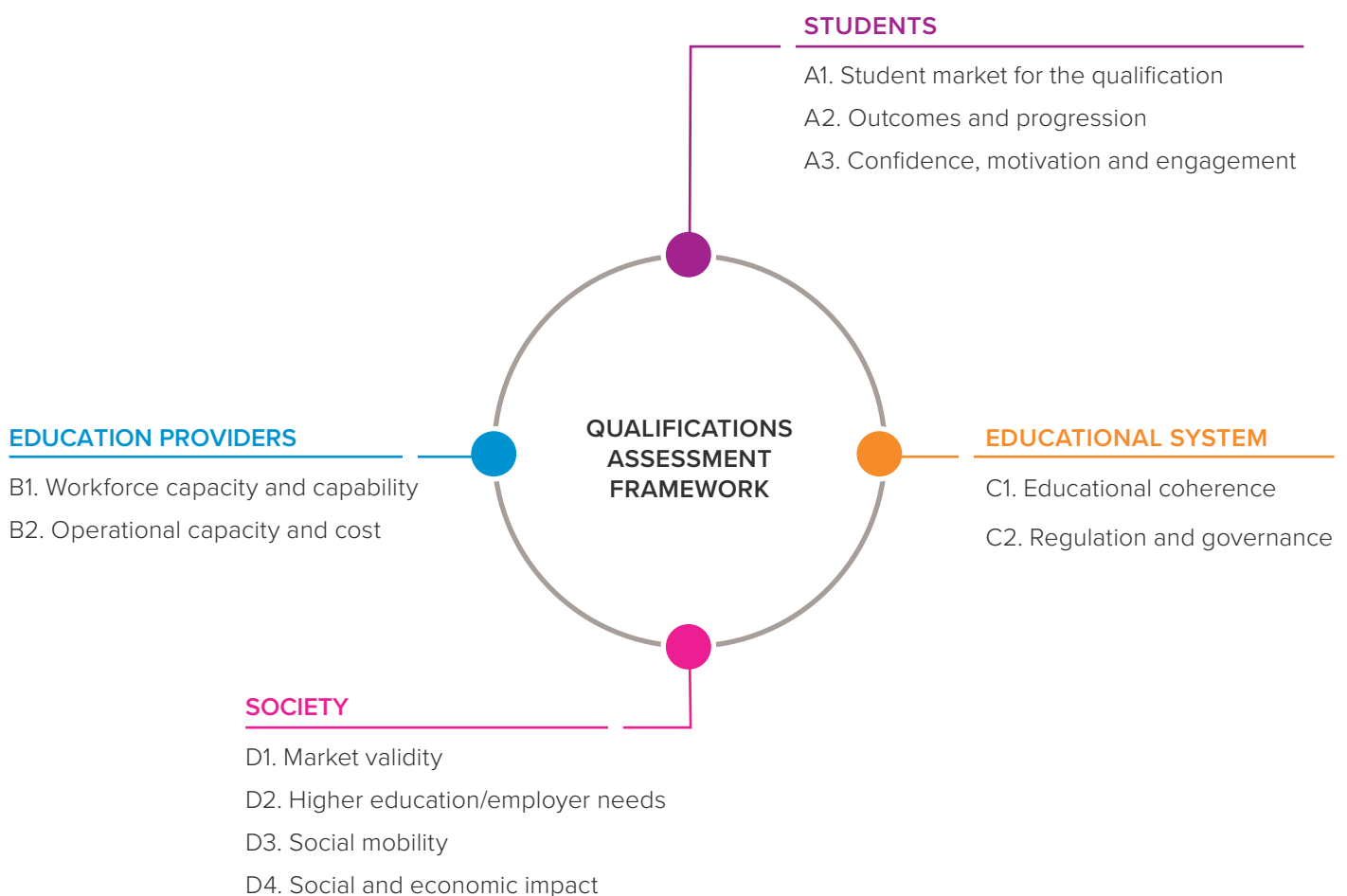
The Framework centres on analysis of the needs of four groups of stakeholders:

- A. Students;
- B. Education providers (e.g. schools, colleges);
- C. Education system (e.g. policymakers, regulators);
- D. Society (e.g. universities, employers, citizens).

For each group of stakeholders the Framework sets out a number of key issues. These are summarised in Figure 1.

**FIGURE 1**

Summary of key issues associated with each group of stakeholders.



For each of the key issues the Framework identifies a set of questions, and for each of these questions it describes possible sources of evidence. The evidence available will vary according to the qualification (and its stage of development), and an important part of the process is to identify the nature and the robustness of the evidence for each key issue and each question. Some questions may be answered using national statistical data (e.g. questions 3 and 4, which concern participation and outcomes). Other items may rely on survey or other data (e.g. question 8, which concerns system preparedness). Some may call on statutory regulations and policies (e.g. question 13, which concerns assessment frameworks). Many questions may be answerable only through professional or expert judgement. Some responses are likely to reflect differing values or ideologies.

A few questions may be unanswerable, especially when the Framework is used prior to implementation of a reform. Nevertheless, it is important to think about these questions, not least to consider what data may need collecting early in the implementation phase to evaluate whether the aims for a new qualification are being met.

Finally, it is likely that different stakeholders may arrive at different answers to some of the questions. They may weigh evidence differently and may come to different overall conclusions. This is to be expected. The purpose of the exercise is not to develop a scorecard – still less to deliver an unambiguous ‘yes’ or ‘no’ verdict – but rather to identify areas where there is strong evidence and clear agreement; to be open and transparent about where evidence is weak; to be clear where there are differences of opinion; and to be honest about the sources of those differences.

## 2. The Framework

**TABLE 1**

The Qualifications Assessment Framework

Sector	Key issues	Questions	Type(s) of information and evidence (available or desirable)
<b>A. Students</b>	A1 Student market for the qualification	1. Which students is the qualification intended to serve?	<ul style="list-style-type: none"> <li>Characteristics of students</li> </ul>
		2. What needs of students is the qualification intended to meet?	<ul style="list-style-type: none"> <li>Fit between purpose of qualification and students' needs</li> <li>Fitness for progression to further education (FE), higher education (HE), and employment</li> <li>Fitness for citizenship</li> </ul>
		3. What is the take up or intended take up of the qualification?	<ul style="list-style-type: none"> <li>Proportion and numbers of students who take the qualification</li> <li>Diversity (e.g. gender) and other biases</li> </ul>
	A2 Outcomes and progression	4. What proportion of students achieve the target outcome?	<ul style="list-style-type: none"> <li>Numbers of students achieving the target outcome (e.g. pass rate)</li> <li>Outcomes for student groups of different socio-economic status</li> <li>Outcomes by gender and other biases</li> </ul>
		5. What proportion of students improve their employment and educational prospects?	<ul style="list-style-type: none"> <li>Quantitative data, e.g. NPD, LEO, PIACC data<sup>1</sup></li> <li>Research on economic returns to qualifications</li> </ul>
	A3 Confidence, motivation and engagement	6. What impact does the qualification have on students' confidence, motivation and engagement?	<ul style="list-style-type: none"> <li>Student surveys. Relevance of content to students' interests</li> <li>Attendance rates</li> <li>Analysis of the purpose of the qualification</li> <li>Impact on progression (e.g. to other qualifications, further education, higher education and employment)</li> </ul>

<sup>1</sup>NPD, National Pupil Database; LEO, Longitudinal Education Outcomes data; PIACC, OECD Programme for the International Assessment of Adult Competencies.

Sector	Key issues	Questions	Type(s) of information and evidence (available or desirable)
<b>B. Education providers</b>	B1 Workforce capacity and capability	7. Are the teachers available to deliver the qualification to the appropriate standard?	<ul style="list-style-type: none"> <li>Numbers of appropriately qualified teachers required (including both specialist and non-specialist)</li> <li>Leadership needs, e.g. structural changes required in schools and colleges</li> </ul>
		8. Are teachers supportive or likely to be supportive of the qualification, and confident and motivated to teach it?	<ul style="list-style-type: none"> <li>Survey data (e.g. Department for Education Teacher Workload survey)</li> <li>Professional judgement</li> </ul>
		9. What professional development do teachers need?	<ul style="list-style-type: none"> <li>Continuing professional development (CPD) requirements, including retraining needs (subject content, use of technology, etc)</li> <li>How these CPD needs might be met (including cost)</li> </ul>
	B2 Operational capacity and cost	10. Do schools and colleges have the operational capacity to deliver the qualification?	<ul style="list-style-type: none"> <li>Processes, resources and technologies, including willingness to offer the qualification</li> <li>Impact on teaching practices, timetabling, etc</li> </ul>
		11. What are the costs and resources needed by institutions to deliver the qualification?	<ul style="list-style-type: none"> <li>Comparisons with other qualifications</li> <li>Costs associated with CPD, teacher recruitment and retention, interventions, restructuring, etc</li> <li>Incentives, funding and other drivers</li> </ul>

Sector	Key issues	Questions	Type(s) of information and evidence (available or desirable)
C. Education system	C1 Educational coherence	12. How does the qualification fit into existing curriculum pathways?	<ul style="list-style-type: none"> <li>Ofsted (or other inspectorate) requirements and expectations of the curriculum offer</li> </ul>
	C2 Regulation and governance	13. How well does the qualification fit into qualification frameworks? 14. If considering a new qualification, when could it be launched?	<ul style="list-style-type: none"> <li>Ofqual (or other regulatory body) regulations</li> <li>Department for Education (or equivalent Departmental) policies, e.g. qualification pathways, funding rules</li> <li>Timescales for development, piloting, implementation and review (evaluation) of qualifications</li> </ul>
D. Society	D1 Market validity	15. What is the exchange value of the qualification?	<ul style="list-style-type: none"> <li>Recognition from schools, further education higher education and (other) employers</li> <li>Comparison with other qualifications</li> </ul>
	D2 Higher education/ employer needs	16. What needs of HE and/or employers does the qualification meet?	<ul style="list-style-type: none"> <li>Links to question 2</li> <li>National skills requirements</li> </ul>
	D3 Social mobility	17. What effect does the qualification have on social mobility?	<ul style="list-style-type: none"> <li>Links to questions 4, 5, and 14</li> <li>Destinations, longitudinal data (see question 5)</li> </ul>
	D4 Social and economic impact	18. What is the impact of the qualification on society and productivity?	<ul style="list-style-type: none"> <li>Economic and other national and international data (see question 5)</li> <li>Evidence that the knowledge and skills gained through the qualification would boost the national economy</li> </ul>

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