



Developing your school with Cambridge

A guide for school leaders

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Foreword

A key and consistent finding from international research into educational effectiveness is that pupil achievement, broadly defined, is influenced most by classroom-level activity and by what teachers do in classrooms (see Muijs et al 2014). Unfortunately the practical realities of running a school can mean that not enough attention is paid to the classroom level. School administrators and leaders can spend most of their time on operational and administrative matters. This guide focuses on classroom-level activity, providing support and guidance to Cambridge schools that want to improve the quality of teaching and learning.

There are many effective approaches to teaching Cambridge programmes. No two schools are identical, even in a common culture, let alone in an environment as rich and diverse as the Cambridge community. How you prioritise the principles and practices identified in this guide, and how you implement them, will vary considerably. This will depend on the culture and values of your school as well as the level of the school's development. Effective educational practice is the result of local ownership and leadership. It must involve careful management of the large number of inter-dependent variables that contribute to it. Only you know your school and its community, and only you can drive school improvement. Cambridge International's role is to support you, to help you make the right decisions for your school.

I hope this guide will prove useful to school leaders as a resource to help evaluate and then develop practice. I also hope you will be inspired to become active within our community of schools. One of the implicit themes throughout this guide is that no individual teacher, school leader or school should ever work in isolation. We all improve our professional practice with critical and supportive friendship.

Dr Tristian Stobie

Director of Education, Cambridge Assessment International Education



1: Introduction

1.1 Audience, aim, purpose and focus of the guide

Many books and articles have been written about improvement in schools and school systems over the past two decades. This has been a period of intense international interest in educational quality and standards. Today, we are in a position where there is a wealth of theory and research evidence about what makes an effective school and a quality education. This material is not always easily available to school leaders and teachers in a practical and coherent form. This Cambridge guide is designed to meet this need for schools that:

- provide one or more of the Cambridge curriculum programmes for their learners
- aspire to achieve a high standard of education for these learners
- are committed to the ongoing process of school development.

This guide will help school leaders and teachers to understand, and put into practice in their own context, some of the important lessons learned from international work on raising quality standards and improving educational outcomes. It is designed to complement other Cambridge resources for school leaders and teachers including *Implementing the Curriculum with Cambridge* and *Developing the Cambridge Learner Attributes*. Find them at www.cambridgeinternational.org/teaching-and-learning

The primary audience for the guide is schools that are newly registered with Cambridge International. Providing one or more Cambridge programmes often involves significant transformation, with new and different approaches. The guide supports the development work that schools will already have undertaken to register with Cambridge International and to plan for introducing one or more Cambridge programmes. Newly registered schools are likely to be 'working towards' the achievement of at least some of the Cambridge standards, which is recognised in the registration process. The development work covered in the guide will enable the school to achieve these standards and then continue to develop to become an even better school.

The guide will also be of interest to schools going through the registration process, and to well-established schools that have achieved the Cambridge registration standards. School development is a journey, and one of the characteristics of outstanding schools and school systems is that they are always striving for further improvements.

The timescale of activity in the guide covers a period of 3–5 years. This will vary depending on what processes you have already put in place and the outcomes achieved in the school. As school development is a never-ending cycle of evaluation and improvement, the activities will relate closely to ongoing cycles of implementation, monitoring, review and revision well into the future.

The **aim** of the guide is to provide an introduction to school development that improves the delivery of Cambridge programmes and thereby supports student learning.

The **purpose** of the guide is to be a user-friendly and practical manual for Cambridge schools in a wide range of contexts. As well as providing some guidance about effective practice, it will also direct users to additional reading on key topics so that schools can access the research evidence directly. It will introduce, but not fully explore, further steps that more experienced schools could take towards achieving sustainable excellence.

The **focus** of the guide is on improving the quality of student learning. This includes:

- a classroom focus on the quality of learning for individual students
- a broader focus on improving the quality of student learning – through developing a school-wide culture of learning supported by a shared educational vision and the systems and processes necessary to achieve and sustain it.

1.2 Resources

This guide contains a limited selection of examples. We are developing further examples of criteria, policies, procedures, documents and approaches described in this guide. When available these resources will be published on our public website. It is very important to stress that these resources are provided to help your planning. You must develop your own procedures and practices in line with your school community's needs.

An annotated bibliography is provided at the end of the guide. Terms used in the guide are defined in the glossary section.

1.3 The challenge of professional and institutional change

Change is, by its nature, disruptive as it involves challenging traditional attitudes and practices to improve and broaden the range of professional skills. School development involves evaluating and refining existing practices and introducing new ones, all supported by professional learning. For teachers this is likely to include developing a broader range of effective teaching practices that support active learning. For school managers and leaders this might include developing new leadership styles and strategies. Introducing change is only the beginning of the process as effective change requires ongoing evaluation and development.

This guide provides some guidance to help schools design their own development plans. How change is managed will depend on the context and culture of the school. While research into school improvement has some generalisable findings, it is important to recognise that every school is unique, with its own context and culture. As Kamens (2013, p.130) points out:

“It should be clear that the search for ‘best practices’, is now an international one. With it come high expectations that there are easily borrowed protocols that can vastly improve local educational systems ... The search for best practice is built on an optimistic faith that ‘a school is a school is a school.’ It assumes that a practice that works in say Finland will work as well in the United States or Germany. It assumes Education is like Engineering.”

The richness of the Cambridge community is its diversity, and we do not believe that education is like engineering. Every school has its own distinctive mission and community, and every class of learners its own character and needs. School development is also a gradual process. Planning needs to move incrementally through stages, recognising the current practical reality the school faces. This guide is not intended in any way to be prescriptive. School leaders and teachers will want to consider the ideas and practices presented here critically. They can then apply them in ways that fit their own unique context, circumstances and needs.

1.4 What are 'standards' in an education system supported by Cambridge International?

It is helpful to have a common understanding of what we mean by 'standards' in the context of Cambridge programmes, our international family of schools and the processes of school development. Standards are clear descriptions used to define quality expectations. In education they often refer to student achievement but they also relate to quality across the whole of a school's work and functions.

The international qualification standard

As we are a curriculum and assessment authority and awarding organisation, Cambridge standards relate to the prescribed syllabus and its assessment. Cambridge International can justifiably claim to set an international standard for its qualifications. At Cambridge Upper Secondary and Advanced levels our qualifications are widely recognised by higher education institutions, universities, employers and other stakeholders as excellent preparation for the next stage of education. Because these standards are international and portable, a student receiving a grade in one country at one time can accurately be compared to a student receiving the same grade at another time and place. Cambridge International is responsible for maintaining these standards and ensuring they are the same for all students in all Cambridge schools.

Our international standard is a combination of three different types of standard. We set and maintain standards defined by our qualifications.

1. **Curriculum standard:** This standard relates to the explicit and implicit demand of the content and skills set out in our syllabuses. The syllabuses and their specifications provide an appropriate selection of material for the age group at an appropriate level of difficulty.
2. **Assessment standard** (also called the attainment standard): This standard relates to the demand of the assessments we set. What students know and can do is measured through assessment processes that are valid, reliable and fair. This means that results students receive are seen as accurate measures of their performance in relation to the particular subjects being assessed.
3. **Grading standard** (also called awarding standard): This standard relates to the achievement we recognise via our grade threshold decisions. Students are awarded a mark/grade accurately reflecting their level of performance.

1: Introduction continued

Maintaining confidence in these standards is fundamental to our operation. We have very strict regulations universally applied to all our schools relating to all areas that might compromise this standard. All of our examination procedures and grade awarding practices, coursework and security regulations are designed to maintain this high level of confidence in our qualifications.

One immediate challenge for new schools is to develop a clear understanding of these Cambridge standards. Only then will they be able to communicate them to learners, parents and other stakeholders. This is obviously important for teachers and leaders in planning, providing, monitoring and assessing the educational programme. It is equally important that learners are helped to develop their own understanding of the standards and what they can do to improve their own achievement.

School standards

There are three other domains of education standard (Faubert 2009) that are particularly relevant to this guide:

- standards related to processes at classroom level
- standards related to processes at school level
- standards related to the school environment.

These three types of standard support the school's achievement of the primary aim: a high standard of educational achievement for all learners. Cambridge International's registration quality standards fit within this category of supporting standards. They set out and exemplify an initial benchmark of quality that schools need to commit to in order to implement successful Cambridge programmes. Because we recognise and value the diversity of schools in the Cambridge family, and the differences in the contexts in which the schools operate, we have not set out further, more aspirational and detailed standards to guide the process of school development. We believe that schools are best placed to determine their own ongoing quality standards, related to their own circumstances and the needs of their learners and communities.

National or state governments are likely to be responsible for determining these standards, as national standards form the basis for evaluation of school quality in the public sector. If national standards are not sufficient for delivering Cambridge qualifications, the school will need to develop and implement their own. In private

schools the governing body and/or owner, as well as the senior management, will be responsible for determining these school-based standards. Internationally many schools seek accreditation with one or more accreditation bodies, which publish their own sets of accreditation standards. These are wide-ranging definitions of quality across the whole of a school's work and functions, and are focused both on quality assurance and on promoting improvement. Schools that are considering applying for international accreditation will find this guide very useful, as the principles and practices outlined are consistent with best international practice.

1.5 Curriculum alignment and coherence

While Cambridge International defines the curriculum and assessment standard, schools are responsible for developing standards related to processes at classroom level and those related to processes at school level that will influence student learning. Aligning what is prescribed and expected with what is actually taught and experienced by the student is one critical activity the school has to address. Because teaching happens locally, only schools can be responsible for ensuring that the taught and experienced curriculum is well aligned to Cambridge curriculum and assessment specifications. Furthermore, the Cambridge curriculum is not designed to be delivered in the same way in all classrooms around the world. While Cambridge International defines the standards, the approach to delivering the Cambridge programmes must be contextualised to optimise its value for the local context. Cambridge International provides teaching support material and exemplar materials but these need to be adapted for local needs.

Schools are a complex system of many interdependent parts. Changes in one area will have impacts on others, so a key concept in school development is coherence. Changes should be aligned and designed to pull in the same direction. The direction will be determined by the mission and values of the school. However, one common value for all Cambridge schools must be improving the quality of student learning and preparing students properly for Cambridge qualifications. A school provides a coherent education when the written, taught, assessed and experienced curricula align, and school practices, incentives and written resources (including textbooks) support the curriculum.

1.6 Leadership and management

Both leadership and management are critical to school development. A useful, if simple, distinction relates management functions to effective operations, making sure that the school is running well. Leadership is focused on the direction the school is going in, ensuring it is doing the right things, has a vision and mission that is inspiring teaching and learning, and improving the school's performance in relation to this. Leadership is also concerned with getting the most out of individuals and developing a collaborative culture.

Within the administrative team of a school different management responsibilities will be assigned to different individuals. Often leadership is also viewed in terms of a position – the principal or director. The principal of a school is responsible for making sure that teaching and learning is effective. It is, however, useful to view leadership as a process rather than just a position of authority. Leadership of school development demands a complex set of skills and qualities. This will be a mixture of expertise and abilities best found in a team or a network of leaders. Each individual leader will bring their own set of skills and attributes to the group. These will combine with those of others to make a powerful whole. Discovering, inspiring, motivating and developing this network of leaders of learning is one of the most demanding but rewarding roles of a school principal. In busy schools too much attention can be given to administration, focusing on managing the day-to-day operations, and not enough on leading learning.

International research demonstrates that leaders make a difference to schools. In a review of the impact of school leadership on learner outcomes, Robinson (2007) grouped leadership dimensions into five main categories:

- establishing goals and expectations
- strategic resourcing
- planning, coordinating and evaluating teaching and the curriculum
- promoting and participating in teacher learning and development
- ensuring an orderly and supportive environment.

In her analysis of the effect of each of these on learner outcomes, based on a review of a number of studies, she found that what leaders (in this case primarily referring to principals) do is very important. The more leadership is focused on teaching

and learning and the professional development of teachers, the greater the effect on student outcomes. The largest impact was the result of leaders promoting and participating in teacher learning and development. The second was planning, coordinating and evaluating teaching and the curriculum.

While school development should have a particular focus on classroom change, it is much more than that because classrooms do not operate in a vacuum. Developing a culture of learning across the whole school community is important. The school climate has a profound effect on attitudes and approaches to learning. Where appropriate, empowering and involving teachers, students, parents and the broader community will help generate a collective sense of responsibility for school development.

The following chapters are designed to help school leaders (broadly defined) to build the skills and knowledge necessary for improving the success of learners. The focus is on developing those areas that have the greatest impact on learner, and therefore school outcomes. These are the two dimensions of leadership identified by Robinson as:

- promoting and participating in teacher learning and development
- planning, coordinating and evaluating teaching and the curriculum.

We also briefly consider other important related areas.

1.7 What do we mean by 'evaluation'?

We use the term 'evaluation' in several contexts in this guide. Evaluation is associated with two different types of judgement which need to be distinguished:

- judgement with a view to hold to account
- judgement with a view to improve.

Throughout this guide the term 'evaluation' is used in terms of judgement with a view to improve. Cambridge schools will be operating under very different circumstances, and standards and expectations will be largely based on the school's context. This will give rise to different judgements required to hold to account. Beyond establishing that all Cambridge recognition standards are met and maintained, holding schools to account is not Cambridge International's concern. As this is a guide for school development, making accurate and valid judgements with a view to improvement is absolutely central. The purpose of judgement is to bring about change that will better support student learning.

One example of this distinction applies in Chapter 6, which considers evaluating teaching. Some schools and school systems will require teacher evaluation also to be teacher appraisal, where the teacher is held to account. Performance review in this situation might, for example, impact on salary. Schools may or may not have a choice over this. What matters in the context of this guide is that teaching improves as a result of the evaluation process.

The same principle applies to Chapter 2, which considers school development planning. Many state systems apply school accountability measures where evaluation is about holding the school to account. In the context of this guide our concern is the process used, data gathered, judgements made and plans to implement that result in better practice.



2: Creating the school development plan

This chapter provides an overview of school development planning. It makes a link between the application and initial planning that a school completes in order to register with Cambridge International, and ongoing processes of quality assurance and school development. The starting point for school development planning is the requirement that the school fully meets Cambridge quality standards defined in the registration process. Once this is achieved school development planning becomes an ongoing cycle involving evaluation, planning and development designed to improve student learning and achievement. The school development planning process should fit naturally with, and complement, the school's ongoing quality assurance policies and practices. These are considered in detail in subsequent chapters.

2.1 An overview of school development planning

Professor David Hopkins, Professor Emeritus at the Institute of Education, University of London (2006) defined the purpose of the school improvement process as being:

"... to improve the learning and achievement of all students and enhance the school's capacity to manage continuous improvement. The focus is upon school level factors (e.g. leadership, planning, professional development) and classroom level factors (teaching, learning and student feedback). These two areas are united through a process of enquiry."

In this guide school development planning is the overarching process of enquiry, evaluation, prioritisation, planning and execution of plans designed to improve student learning and achievement.

Enquiry is the first part of the process of evaluation. Evidence is gathered and interpreted to ensure judgements are reasonable and accurate. A school needs to create a flow of data and evidence about how it is performing in key areas. This evidence will be generated annually from processes like those described in Chapters 5 and 6, which consider in detail how student learning can be improved through assessment and evaluating teaching. Evidence will lead to judgements about what is working well and what needs attention. The process helps a reflective school to:

- take ownership of monitoring and evaluating its own performance and to plan effectively for improvement
- gather information and evidence to review progress in terms of the whole-school experience as well as learner outcomes

- build up a picture of the quality of provision in the school over time – this will provide the school and its community (the stakeholders) with a measure of how well learners are performing and the standards being achieved
- identify good practice so that it can be shared throughout the school.

Development plans map out how issues identified during the evaluation phase are followed up. They should be a response to the following questions:

- What specific aspects of our work do we need to develop (priorities and intended outcomes)?
- How are we going to develop them (processes)?
- What resources do we need to achieve this (resources)?
- How long will it realistically take to achieve (timescale)?
- Who is going to lead and manage the achievement of each objective and the overall plan (responsibilities)?
- How will we know that we have achieved the plan (evaluation)?

Annual development cycles and periodic whole-school evaluation

Development planning can just be based on an annual review using evidence generated in the process of running the school. One limitation of this is that it does not allow for a more complete evaluation of the school system as a whole. It also uses a limited number of sources of evidence. For this reason we advise schools to periodically (usually every five to 10 years) have a major whole-school evaluation.

2: Creating the school development continued

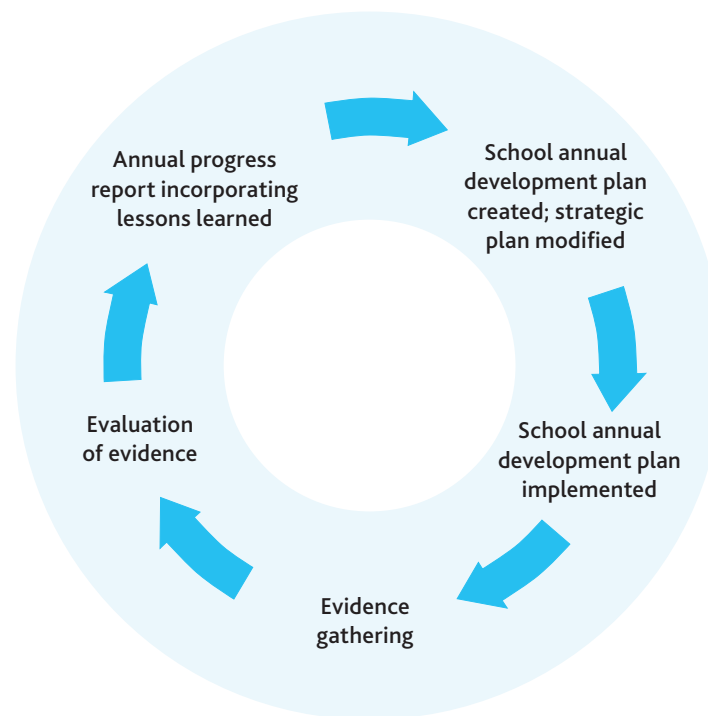
How this is organised will depend on the school context. Normally the process starts with a comprehensive school self-evaluation. This examines all areas of school life, updates the school's mission, vision and educational aims, and considers school strengths and limitations from the perspective of the whole-school community. There are roles for representatives from each group of stakeholders including teachers, students, parents and governors or owners. Their contributions will provide perspectives that will inform the school's review and help identify the next steps that need to be taken. The process is a learning activity for all those engaged in it. The school leadership team should plan to devolve responsibility to groups of other leaders, teachers and stakeholders. If the process is managed well, all those who participate will gain skills, experience and confidence.

Sometimes the school is seeking accreditation with an agency. See, for example, the Council of International Schools (2015). In this case the school evaluation process will use a standard self-evaluation format and incorporate external validation of this. This involves a team of appropriately experienced external evaluators visiting the school. Their role is to validate the school's self-evaluation, be 'critical friends' and make sure the school is actually meeting the standards required for accreditation. They provide an informed outsider's perspective and check the self-evaluation is a realistic reflection of the quality of education in the school.

A strategic development plan is normally created following this comprehensive process of whole-school evaluation. Once written, the strategic plan identifies and explains the school's strategic priorities for a specified period of time, normally 5–10 years. It also identifies actions needed to achieve these goals and considers how resources will be used to achieve the plan. Within this timeframe there is likely to be detailed planning for the first year or two, with higher-level planning for the rest of the plan's lifetime. Implementation will be monitored and the plan will be adjusted in the light of ongoing feedback incorporated in the annual development cycle. Towards the end of the plan the outcomes will be evaluated and the process will then begin again with a new review and self-evaluation. The long-term strategic plan created by this process will provide guidance for the whole-school community – about the school's objectives, how they are to be achieved, and how the members of the school community will contribute to their achievement.

The annual school development cycle, sometimes referred to as the management cycle, is a process of goal setting, implementing actions, monitoring, evidence collecting and evaluation that occurs every year. This leads to affirmation or refinement of the school's strategic plan (see Figure 1).

Figure 1: The annual school development cycle



2: Creating the school development continued

2.2 Achieving Cambridge registration quality standards

Schools registering with Cambridge International are required to complete an application form showing how the school measures up across five sets of registration quality standards (see Table 1). Some standards have to be fully met before the school can teach Cambridge programmes. These include:

- a clear mission
- positive relationships between staff and students
- appropriate qualified staff
- reasonable and safe premises
- transparent financial management and procedures for complaints
- examinations security.

See *Becoming a Cambridge International School: A Guide to the Registration Process* for full details. You can find this document at www.cambridgeinternational.org/images/163193-becoming-a-cambridge-international-school.pdf

Schools, however, are not expected to demonstrate evidence of having fully achieved all the registration standards before they are registered. They can be 'working towards' achieving some of these standards. Examples are:

Standard 1: The school's mission and educational values

- The culture of the school is learner-centred and supports students and teachers to become confident, responsible, reflective, innovative and engaged.
- International awareness and global perspectives are promoted through the curriculum and other activities.

Standard 2: School management and leadership

- The school principal is suitably qualified and experienced in educational leadership.
- The senior management team and the governing body demonstrate clear goals for the successful introduction of Cambridge qualifications and can evidence planning to support effective implementation.
- Senior staff are committed to setting targets for school improvement and staff development, supported by well-designed performance review and self-evaluation.



2: Creating the school development continued

Standard 3: Quality of teaching and learning

- The school curriculum is clearly expressed and accessible to teachers, students and their parents.
- Assessment outcomes are monitored and evaluated with clear feedback into teaching and learning strategies.
- Teaching takes account of students' diverse learning styles and individual needs.
- The school has a well-designed approach to the professional development of teachers and other staff.
- The school has a clear policy to address the language needs of learners.

Depending on the outcome of the registration process, schools will need to review and build upon their initial development planning in order to make sure that these standards are fully achieved as soon as is practically possible. This must be the initial priority for newly registered Cambridge schools – this document is designed to help in this process. Even when the Cambridge registration standards are achieved, schools will want to make sure that they are maintaining them and striving for further improvements. No school can ever claim that it is perfect or afford to be complacent. One of the hallmarks of excellent schools is the fact they are constantly seeking improvements in ways to enhance the learning and achievement of all students.

2.3 Preparing the school development plan

The Cambridge registration quality standards (see Table 1) provide a suitable starting point for new schools implementing formal school development planning for the first time. Schools that have recently registered with Cambridge International should use the initial development plan, part of the application process, as the starting point. Following registration most schools will have some standards identified as needing further work, and the initial priority must be to address these. Once this is achieved the objective becomes continuous school improvement.

Reviewing the initial implementation of Cambridge programmes

Conducting regular reviews of the school curriculum, and the effectiveness of its implementation and delivery, is a critical part of the school development process. An absolute priority for newly registered schools will be to evaluate the implementation of the Cambridge programme. This will include reviewing the effectiveness of each of the contributing factors, answering the following questions:

- How well do the schemes of work and teaching plans support the successful implementation of the curriculum in the classroom? (the school's written curriculum is well aligned with the Cambridge prescribed curriculum)
- Are teachers using appropriate teaching strategies? (the written curriculum is well aligned with the taught curriculum)
- Are learners achieving appropriate results? What progress have learners made? (the assessed curriculum is aligned with the taught and written curriculum)
- What is the experience of learners? (the experienced curriculum is aligned to the written, taught and assessed curriculum)
- Are the conditions for learning supportive?
- Do teachers have the necessary resources and professional development?
- Are school policies well aligned, establishing the right priorities and sending the right messages?

To evaluate effectively, no one piece of evidence is sufficient on its own. You will need to collect data from a wide range of sources and compare it to generate an overall picture. This is sometimes referred to as triangulation. Figure 2 shows a review model for a school evaluating the initial implementation of a Cambridge programme, identifying different sources of feedback. This review model can also be used for evaluating the student learning experience in groups of subjects, grades and for specific groups of learners.

2: Creating the school development continued

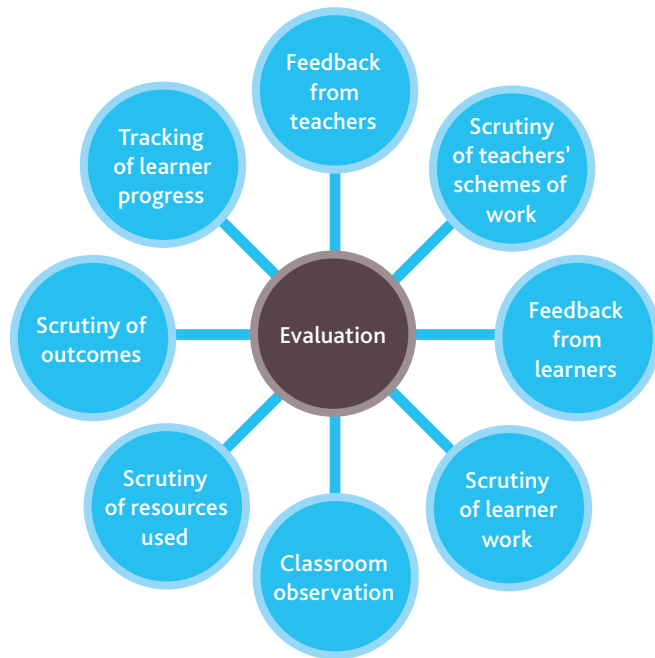
Meeting our registration quality standards

Table 1: Cambridge registration quality standards

1. The school's mission and educational values	2. School management and leadership	3. Quality of teaching and learning	4. The physical environment of the school	5. Legal requirements
<p>a. The school has a clear mission statement that makes reference to its educational values.</p> <p>b. The culture of the school is learner centred and supports students and teachers to become confident, responsible, reflective, innovative and engaged.</p> <p>c. International awareness and global perspectives are promoted through the curriculum and other activities.</p> <p>d. Relationships between staff and students are positive, demonstrate mutual respect, and the school has established and consistent expectations of behaviour.</p>	<p>a. The school principal is suitably qualified and experienced in educational leadership.</p> <p>b. The senior management team and the governing body demonstrate clear goals for the successful introduction of Cambridge qualifications and can evidence planning to support effective implementation.</p> <p>c. Senior staff are committed to setting targets for school improvement and staff development, supported by well-designed performance review and self-evaluation.</p> <p>d. There is effective and transparent management of school budgets.</p> <p>e. A complaints procedure is in place that effectively manages complaints for parents and other stakeholders.</p>	<p>a. The school is appropriately resourced with sufficient staff employed in management, teaching and support roles.</p> <p>b. The school curriculum is clearly expressed and accessible to teachers, students and their parents.</p> <p>c. Assessment outcomes are monitored and evaluated with clear feedback into teaching and learning strategies.</p> <p>d. Teachers have appropriate qualifications to deliver Cambridge programmes and qualifications successfully.</p> <p>e. Teaching takes account of students' diverse learning styles and individual needs.</p> <p>f. The school has a well-designed approach to the professional development of teachers and other staff.</p> <p>g. The school has a clear policy to address the language needs of learners.</p>	<p>a. The school premises create a positive learning environment for students.</p> <p>b. Library or learning resources adequately support delivery of the curriculum.</p> <p>c. Specialist facilities are provided (e.g. for Cambridge syllabuses in art and design, music, languages, ICT, physical education and the sciences).</p> <p>d. Secure storage arrangements for question papers and other examination materials comply with our regulations.</p> <p>e. Appropriate facilities that comply with our regulations for accommodating examinations have been identified.</p> <p>f. A good understanding of the Centre responsibilities set out in the first section of the Cambridge Handbook.</p>	<p>a. Fire certificate.</p> <p>b. Government approval to operate, including any approvals needed to provide the Cambridge curricula you wish to offer.</p> <p>c. Health and safety policies in line with government requirements.</p> <p>d. First aid provision in line with government requirements.</p> <p>e. Child protection policies in line with government requirements.</p>

2: Creating the school development continued

Figure 2: Sources of evidence for a school reviewing the implementation of a Cambridge programme



Structure and templates to assist planning

Schools will adapt or develop a format that meets their own needs and circumstances – no one template is suitable for all. There are two points to take into account before choosing a format:

- The period of time covered by the plan. Medium to long-term strategic planning normally considers a period of about 5–10 years. The format of the plan should help users to see how the planned activities are completed over this time. Annual plans need to be more specific, showing in detail the full set of activities and outcomes for that year. This way all contributors will have a clear understanding of what to do.
- The priorities identified in the plan. Plans should prioritise and focus on the most important developments. Some can be achieved in a year and some will take

several years to achieve. The format of the plan should help users to understand the individual objectives and how they are to be achieved. It should also show how the objectives interact and are connected.

The plan format will include high-level overviews of the development plan priorities and objectives, as well as detailed summaries of activity by priority. It is best to present the information in a table format, with explanations as necessary. The format and language of the plan should be accessible, not just to school leaders and teachers but also to other members of the school community and stakeholders.

Table 2 (on page 15) is an example of an annual planning template for an imaginary school that is about to start its second year teaching Cambridge IGCSE® programmes. This school wants to make sure that important changes in teaching and learning started in the first year will continue and expand into the second. The school has decided it needs to focus on the teaching of science (the introduction of science practicals), English (a stronger emphasis on listening and speaking, and on extended writing) and history (development of source-based analysis). These objectives are all intended to have a direct impact on the quality of teaching and learning (Cambridge registration standard 3 as well as registration standard 1b: *The culture of the school is learner centred and supports students and teachers to become confident, responsible, reflective, innovative and engaged*).

These three subject departments will identify case studies of good practice from the first year of teaching. This includes the use of assessment in support of learning, learner feedback and effective practice identified from other sources, particularly Cambridge training courses teachers have completed. This material will be discussed and heads of department will be responsible for preparing the detailed plans with actions, responsibilities and success criteria identified. Departments will review and update their schemes of work and monitor the teaching of the new Grade 10 schemes. Towards the end of the plan period, once the results from the first Cambridge IGCSE entry are available, the school will review the whole Cambridge IGCSE programme. It will use data from questionnaires and 'exit interviews' with students completing the programme. Specific activities are described in the plan. We consider the following in detail in subsequent chapters: teacher evaluations, mentoring, writing schemes of work and assessment in support of learning.

2: Creating the school development continued

The final column will be used for periodic reports on progress, using a 'traffic light' (Red, Amber, Green – RAG) system. In the RAG report, **red** type indicates that the activity is not on target, **amber** that deadlines or actions are at risk, and **green** that the activity is meeting deadlines and on target. When the activity is finished it is marked as completed.

Practices also need to feed into, and be supported by, clear school-wide policies. (This is the subject of the Chapter 3.) These can support the development of teaching practice at a whole-school level. This will support the extension of new styles of teaching and learning into other areas of the curriculum and other years.

2: Creating the school development continued

Table 2: Imaginary annual planning relating to specific objectives

PRIORITY 1: Teaching and Learning							
OBJECTIVE: To support the continuing development of learner-centred pedagogy in Cambridge IGCSE courses in Grade 10							
RELEVANT CAMBRIDGE STANDARDS: 1.2, 3.3 and 3.5							
LEADERSHIP/COORDINATION BY: Ruchira Mitra							
MONITORING/EVALUATION BY: Lee Harris							
	Specific objectives	Tasks and action required	Who is responsible?	Timescales/ key milestones	Resource implications?	Success criteria – Impact on student learning and achievement	Progress report (RAG)
1	Science a. Develop science practicals	• Evaluation of first year Cambridge IGCSE implementation identifying good practice	Waleed	May previous year	\$10,023	Evaluation produces clear recommendations	Closed
		• Upgrading Science lab B	Juan	Work completed Jun–Jul		Work completed by 31 July	Red
		• Mentoring	Waleed to mentor John	Sep–Dec		John's evaluation in January	Green
		• Teacher evaluation criteria added and included in evaluations	Sarah	Jan–Jun		Evidence emerges in evaluations	Green
		• New assessments in support of learning designed and incorporated into schemes of work	Sarah to lead	Sep–Dec		Evidence in schemes of work and their implementation observed in teacher evaluation process	Amber
2	English A. Enhance listening and speaking skills B. Support extended writing	• School workshop bringing in consultant David Smith	Hema to organise	15 October	\$500	Recommendations identified and implemented	Closed
		• Rewrite schemes of work indicating how skills are taught	Hema to oversee	By 31 Aug before teaching begins		Evidence in schemes of work and their implementation observed in teacher evaluation process	Green
		• Mentoring	Hema to mentor Chris	Sep–Dec		Chris's evaluation in March	Green
		• Teacher evaluation criteria added and included in evaluations	Jane	Jan–Jun		Evidence emerges in evaluations	Completed
3	History A. Develop students' ability to analyse source material	• Attend Cambridge introductory History training workshop	Peter and Uzma	Sep	\$500	Attending conference and dissemination of feedback to department	Completed
		• Purchase new textbooks identified as supporting source interpretation	Jay	Aug		Purchased and used	Completed
		• Rewrite schemes of work indicating how source material will be taught	Whole department led by Mark	By 31 August before teaching begins		Evidence in schemes of work and their implementation observed in teacher evaluation process	Completed
		• Teacher evaluation criteria added and included in evaluations	Mark	Jan–Jun		Evidence emerges in evaluations	Green

3: Developing policies that support improvements in teaching and learning

This chapter explains the importance of having clear policy documents that define values, principles and practices to guide school evaluation and development. We identify key policy documents and consider processes that you can use to create and revise them. This chapter also has a brief section considering how parents should be engaged to support school policies and practices aimed at enhancing learning.

3.1 Policy documents

A policy is a guide for action based on clear principles. A policy is only worthwhile if it is used and influences practice and decision-making in the school. If it just remains in a file on a shelf it serves no purpose and has no value. School policies will inform the development and revision of other documents, for example student, staff and parent handbooks.

As we require a number of supporting documents for the Cambridge registration process, schools that have completed the process will already have some policy documents. These will need regular review and updating in parallel with the school evaluation cycle. In this chapter, we provide guidance on writing policies and the structure and content of effective policies. Statements that clearly define standards are also important policy documents, in particular those defining the school's expectations for teaching and learning, assessment and teacher evaluation. We cover these in Chapters 4, 5 and 6.

Key policy documents include:

1. **Mission statement and educational values:**

The mission statement is a written declaration defining the school's educational purpose. The school's educational aims and values might be included in the statement or listed separately. Some schools also publish a vision statement. This gives an indication of the future direction of the school, and should be widely shared and inspire commitment. These three elements should focus the development planning process and guide the educational priorities of the school. They are therefore very important, informing on all other policy documents.

2. **School curriculum policy:**

This policy sets out the principles upon which the school's curriculum has been constructed. It explains how the curriculum should progress vertically (from one age level to the next) and horizontally (the requirements and choices for a particular year). The document might also exemplify the principles and approaches to teaching, learning and assessment. Or, these might be covered as separate policies that are cross-referenced with each other (see Chapter 5.2 on assessment policy). The curriculum policy will also identify the outcomes expected for learners. It will be based upon the school's vision and mission statements, and should clearly relate the curriculum that is offered to the school's educational values and the Cambridge learner attributes (see Chapter 4, Table 4).

3. **School language policy:**

This requirement is included in the registration process, specifically for bilingual and multilingual schools. These schools need to make clear how they will structure the curriculum, and organise programmes and support to meet the needs of learners for whom English is a second or third language. It is also important in schools with a majority of students who are proficient in English but do not have English as their first language or mother tongue. The language policy should indicate how the school will encourage and support the maintenance of students' first languages.

4. **Performance management – Teacher and leaders' evaluation:**

This will include an account of how the work of teachers and leaders is evaluated. It should include explanations of accountability for each individual's responsibilities. Standards for teachers and leaders will be identified and evaluation practices explained based on the principles that underpin them. In Chapter 6 we give

3: Developing policies that support improvements in teaching and learning continued

guidance on developing standards for teaching planning and putting into place a teacher evaluation system. We consider that school boards and/or the school owner are responsible for the performance review of the school director, chief executive or principal.

5. **School professional development policy:**

The professional development policy sets out the purposes and objectives of the school professional development programme. It describes the kinds of professional development that are available to staff and their responsibilities and entitlements in this area. Plans for professional development need to be very closely linked to the evaluation process. Therefore, this policy needs to be cross referenced with the performance management policy and school curriculum policy, which will identify priority areas that need to be supported.

6. **Code of conduct for students and teachers:**

We do not cover student conduct and behaviour in this guide. However, it is self-evident that students must have a clear understanding of expected behaviours and schools must consistently apply appropriate rules of conduct to achieve excellent learning outcomes. Cambridge schools will want to include in the code some account of the Cambridge learner attributes and how they relate to the expectations and social and academic behaviours of learners in the school.

7. **Complaints policy:**

The way in which the school deals with complaints, particularly those from students and parents or carers, needs to be clear.

Other important supporting documents include:

8. **Organogram and job descriptions for the senior management team:**

The organogram is a graphic representation of the organisational structure of the school. It shows the individual members of the senior leadership team, from the principal down, their titles and areas of responsibility, and other key leaders and groups of staff they are responsible for. The job descriptions should clearly state the overall purpose and accountabilities of each management position, and identify specific roles and responsibilities. There should be a clear line of accountability, in terms of who the post-holder reports to, and which key positions report to the post-holder. Finally, it should show any conditions that affect post-holders' work,

and the constraints within which they work. The job descriptions will have been discussed with and accepted by the individual post-holders. The organogram should demonstrate a clear, analytical account of the major areas of responsibility for achieving school objectives.

9. **Roles and responsibilities with respect to Cambridge programmes and qualifications for senior management team:**

In many schools a Cambridge curriculum is followed by all students, but in other instances it is part of a wider curriculum. Therefore leadership responsibilities for the Cambridge programme may make up the whole of an individual's responsibilities, or only a part. It is equally important that the school identifies and records how leadership responsibilities associated with the effective provision of a Cambridge programme have been allocated. The detail of these responsibilities will be included in job descriptions.

10. **Key staff CVs (principal and teachers involved in teaching Cambridge syllabuses):**

Cambridge International needs to see these CVs as assurance that all involved have, or intend to achieve, a level of skill and experience appropriate to their specific responsibilities in the Cambridge programme. These documents are also important for teacher evaluation and professional development planning. Therefore all school leaders and teachers will want to maintain up-to-date versions.

3.2 Creating, developing and implementing school policies for teaching and learning

Schools will have some written guidance and information for teachers, learners and parents about how the school operates, even if formal policies do not exist. Examples might include a staff handbook that gives guidance on what teachers should do if a child misbehaves in school, or how they should assess learners' work. A handbook for learners and parents will include a range of information such as school procedures, homework and reporting guidance. These handbooks should be based on clear policies rather than policy emerging from the handbook.

Writing clear policies is a very valuable process that can help the school run better. Clear policies will make sure that the approaches used by everyone in the school are consistent and efficient. These will then determine what is written in secondary documents including handbooks and procedures.

3: Developing policies that support improvements in teaching and learning continued

Suggestions for developing or reviewing school policies:

- Establish a School Policy Steering Group. This group will prioritise work, consider draft policies, make any final revisions and make sure all school policies are consistent and reflect the school ethos and values. Consider including parent, governing board and different staff group representatives, as well as senior management. Too many representatives, however, will make the group less effective. As quality is more important than quantity, focus on writing and reviewing a few policies each year.
- Set up working groups, reporting to the steering group, to draft each policy. Consider including parents and older learners in these groups where appropriate. These groups will discuss, develop and then write the draft policies, so each one will need to include at least one senior member of staff.
- Use the expertise and experience available in the school. For example, if a teacher or administrator is responsible for assessment, it makes sense to involve them in writing the draft assessment policy or to lead the working group tasked with writing it.
- Use example policies or policies developed by other schools as a starting point, but do not implement them in full. For the policy to succeed you must own it and make it specific to your school's context.
- Clarity and brevity are important. Attach appendices and refer to other policies and guidance documents where necessary.
- Policies need to be accessible to the whole community and need to be written in language(s) that make this possible.
- Consult with representatives of all those affected by the policy before publishing the final version. Where policies are new, think about how and when they will be introduced.

Policies can be short and to the point – the procedures and the instructions that follow will give more detail of how the policy is implemented. This elaboration is suitable in documents like handbooks for teachers, learners and parents, which is why these should be produced (or revised) after policies are established.

Each policy will usually be formed through consultation and be written by people with the most knowledge and understanding of the subject area. Therefore it is a good idea to agree on a template that you can use for all policies. This will make sure that the approach and style are consistent and will act as guidance for those writing the policy.

3: Developing policies that support improvements in teaching and learning continued

Table 3: What makes a good policy

What makes a good policy?
<ul style="list-style-type: none">• informative• clear• as concise as possible• easy to understand• up to date• reviewed regularly• approved by a group that includes the principal and/or senior leaders• consulted upon with stakeholders (staff, parents, learners ...) and, where necessary, with legal counsel• approved by the governing board• its application in school practice is evident
Policies should include:
<ul style="list-style-type: none">• the name of the school• the title of the policy• the purpose of the policy• the scope of the policy and to whom it applies• the date and issue number of the policy• the date by which the policy should be reviewed• the name and title of who is authorising the policy• references to any other appropriate policies.

3.3 Engaging parents and carers in improving learning

"Education is a triangle with three legs: parents, child, school and if any of the legs fall, the triangle falls as well" (Harris and Goodall 2007, p. 2).

Parents are key partners in the drive to improve student learning. Their active participation in this partnership makes a difference, and so engaging with parents is a key priority for any school. According to evidence gathered in the United States (Henderson and Mapp 2002, p. 7) learners whose parents were involved with their school and their learning were more likely to:

- achieve more highly (gain higher grades and test scores)
- enrol in higher-level programmes
- attend school regularly
- have better social skills, be well behaved and have good attitudes to school and to learning
- graduate from school with the qualifications to go on to higher education.

Parents can make a very significant contribution to the self-evaluation and goal-setting processes described in Chapter 2. In some cases it might make sense for parents to be involved in policy developments described above. It is absolutely essential that parents understand the mission and values of the school.

Learning does not begin or end at the school gate. If parents understand and support the learning that happens in school, this will have a very significant impact on learner achievement. Parental engagement is more about parents engaging with the learning of their children, rather than engaging with the school. When parents and teachers work together to improve learning, learners achieve more highly. When parents support their child's learning in the home, it makes a bigger difference than when they support activities in the school. Parental involvement in school-based or school-related activities can have an impact on a child's social development and can help to embed the partnership with the school. However, where these activities are not directly connected to learning they have little impact on learner achievement.

3: Developing policies that support improvements in teaching and learning continued

Schools should consider the following:

- Make parental engagement a priority. Have a clear communications plan with parents.
- Prioritise parents engaging with their child's learning rather than just involving parents in the school. Support the engagement of parents who are already involved in their children's learning, as well as trying to improve the partnership with those who are less engaged.
- Be as flexible as possible in provision for meeting parents face to face and talking to parents remotely. Where it is difficult for parents to come to your school regularly use alternative means of communication, for example video-conferencing or video phone calls.
- Think carefully about the nature of communication with parents. Is it two-way or usually just communication that informs or reports to parents? Are parents encouraged to communicate openly about their child's learning and progress? How can this process be improved?
- Use new technologies to support parental engagement, but think carefully about the best way to do this. For example, share course outlines online and, where appropriate for certain age groups, homework assignments.
- Include policies and practices for engaging parents in appropriate school policy documents.



4: Teaching Cambridge programmes

“ Learning happens when students have to think hard ” (Husbands 2014).

Improving teaching is the single most important intervention that a school can make to improve students' learning and performance. The written curriculum is produced in the school and is an interpretation of Cambridge syllabuses reflecting local needs. Schemes of work are either adapted from models supplied by Cambridge International or written by teachers and used to guide teaching. One indicator of excellence is that the written, taught, assessed and experienced curricula are well aligned. Good teachers constantly use feedback from students to fine tune their plans and activities (considered in detail in Chapter 5). The most effective approach to delivering Cambridge programmes is active learning. We briefly consider this here, giving links to other Cambridge resources. Excellent teachers are highly reflective and focus not only on the outcomes or products of learning, but also on the processes of learning. Differentiation centres on looking for patterns of needs in students. Existing and emerging technologies can be valuable teaching and learning resources if they are thoughtfully incorporated into planning.

4.1 The quality of teaching

Excellent teaching is the most significant factor that affects learners' academic performance and the development of the learner attributes (see Table 4). Successful schools develop and nurture highly skilled teachers who are encouraged to be creative professionals working in a collaborative culture. Good teachers have high expectations of the learners in their classrooms, and of themselves as learners of pedagogy and practice. They see their own development and learning as a continuous process.

What teachers do in the classroom has the biggest impact on student learning and outcomes. A good written curriculum by itself does not result in improved learner progress unless the teaching is also good. "A bad curriculum well taught is invariably a better experience for students than a good curriculum badly taught ... what matters is how things are taught" (William 2011, p. 13). Effective teaching increases the rate of learning. According to William (2011, p. 20), citing recent studies: "The most effective teachers generate learning in their students at four times the rate of the least effective teachers."

Coe et al (2014) define effective teaching as that which leads to improved student achievement using outcomes that matter to their future success. They identify six components of great teaching, all of which are important. The two with the strongest evidence of impact on student outcomes are pedagogical content knowledge and quality of instruction. Effective teachers have a deep knowledge of their subjects as well as an understanding of how students think about subject content at different developmental stages (pedagogical knowledge). They support this with a range of effective practices including:

- the effective use of questioning
- the effective use of assessment
- reviewing previous learning while progressively introducing and scaffolding new learning
- giving time to embed skills
- modelling good thinking.

4: Teaching Cambridge programmes continued

Classroom climate and management moderately affect student outcomes, with teacher beliefs and professional behaviours having some evidence of impact.

Muijs et al (2014) consider key findings from 35 years of research on effective teaching. The quantity of academic activity is critical. Effective teachers manage the classroom environment. They maximise students' active engagement with learning, supported by an appropriate school calendar and timetable. There is a climate and culture of learning both in the class and the school. Effective teachers carefully structure lessons, beginning with overviews and objectives, explaining the content to be covered, identifying the most important ideas and reviewing key learning objectives. In this way they help students to understand the place of a particular piece of learning within the larger picture, helping them make connections.

Good teachers also instruct and talk much of the time. It is a misconception that they let students do most of the talking. Effective teachers spend much of the time asking focused questions, facilitating discussion and giving feedback rather than lecturing. Instruction and questions are carefully targeted to make students think hard. It is not enough for teachers to have good knowledge of the subject and the material they are teaching, although this is essential – they must make it understandable to learners. Planning the overall course thoroughly, as well as unit and lesson planning, is important so that the learning journey is clearly defined. Planning a variety of learning activities and developing an environment in the classroom that engages, stimulates and supports learners is important. Effective teachers check learners' understanding repeatedly and make sure that learners are able to use and apply their understanding in different contexts. They respond to the feedback learners give them by adjusting the way they are teaching. In this way teachers help to bring understanding and knowledge to a higher level than learners could achieve on their own – focusing on what Vygotsky (1978) describes as the **zone of proximal development**.

Muijs et al (2014) emphasise teachers' expectations of students as an important factor in teacher effectiveness. Pupils who teachers expect to do well actually do better. This is not just a matter of teachers accurately predicting student potential. Students are very sensitive to subtle messages and behaviours generated by teachers' expectations.

More recently there has been evidence identifying the importance of metacognitive awareness and strategies on students' academic performance (see Muijs et al 2014).



Metacognition, often described as thinking about thinking, is concerned with the learner managing their own learning. To be effective this is a complex process because the learner has to accurately understand their learning, different procedures, strategies and skills, and know when and how to use them. They also need to be able to self-evaluate the effectiveness of their actions, so self-regulate. It also requires students to have a disposition to behave in a certain way. Of particular interest is research that suggests that effective metacognitive awareness and behaviour might, up to a point, compensate for students' cognitive limitations in a discipline (Veenman et al 2006 in Muijs et al 2014). What teacher behaviours support the development of metacognitive skills?

Metacognition is closely associated with helping students become self-regulated learners – learning how to learn. It is essential that learning how to learn is naturally infused in the process of subject learning – it cannot be effectively taught in isolation. Good teaching has always supported the development of metacognitive awareness, and

4: Teaching Cambridge programmes continued

the practices identified throughout this guide provide a good starting point. Having a higher-level overview of the subject and what constitutes excellence is important for learners as it provides a basis for them to understand their own work in relation to it. Supportive approaches include:

- effective feedback, using assessment as a tool that supports learning
- searching questioning that requires students to reflect on the processes, not just the products of learning
- teachers modelling effective thinking.

Students and parents need to be aware of the value of nurturing this capacity. It will help improve student academic performance as well as develop learning maturity, supporting students in further education and the workplace.

One distraction that is often presented is that skills are emphasised and presented as an alternative to content. As Hattie (2015, p. 14) argues, this is a false dichotomy: *“The art of teaching is to balance the need for surface knowledge with deep processing of this knowledge. Deeper thinking skills need content on which to work. You cannot use deeper thinking skills unless you have something to think about.”* As Hattie points out, when learning something new, the learner first needs to develop surface understanding based on knowledge and simpler applications of skills. Strategies like enquiry-based and problem-based learning should build on a solid foundation of surface-level understanding. Excellent teachers understand when to teach new ideas developing surface understanding, and when to extend these and go deeper. This is particularly important when planning lessons and schemes of work.

Another distraction for teachers can be ideas simplistically presented as effective approaches to teaching and learning. There is little evidence, for example, of the effectiveness of learning styles and multiple intelligences (Muijs et al 2014). Too often these complex concepts are misunderstood and misrepresented in terms of teaching approaches and applications.

4.2 Active learning

The approach to teaching and learning required for learners to achieve their maximum potential using Cambridge curricula and assessments is based on active learning. Active learning is often misunderstood. It does not mean that learners have to be involved in lots of activities in each lesson or that all activities need to be centred on student enquiry. It refers to processes that engage learners and promote the skills of analysis, evaluation, problem solving, synthesis, critical reasoning and creativity – in other words, requiring learners to think hard. So activities such as reading, writing, discussion (in groups or whole class), collaborative learning, problem-based learning, the use of simulations and case studies can all be used for active learning, provided they are well planned in relation to the learning objectives.

Teaching and learning have strong cultural dimensions. Sometimes schools new to Cambridge International worry about how they can implement active approaches to teaching and learning. Often these are schools working in cultures where the teacher is an authority and the student is not encouraged to question. While schools do need to engage with the concepts and strategies associated with active learning, it is important that they do this in a sensitive way, taking into account their own circumstances. We advise you to manage change in an incremental way. For example, a school could take only a few of the ideas presented in this guide and work on these during the initial years of school development planning. If the school is operating in a culture and community where student performance in examinations is the overriding imperative, then focus initially on developing formative assessment. This will be restricted to the purpose of feeding back into the teaching and learning process in support of Cambridge qualifications and assessments. (See Carless 2011 and Section 5.1 in the next chapter.) Doing this really well is an important first step for more ambitious approaches in the future.

The Cambridge learner attributes (see Table 4) are designed to support active learning. They encourage learners to take intellectual risks and recognise that the processes of learning are important, not just the products of learning. How this is done needs to be based on school culture and context. Cambridge learners will achieve more if they see learning as challenging and enjoy the act of striving for achievement, a necessary part of growth. There are many important habits that different cultures value, which should

4: Teaching Cambridge programmes continued

be nurtured. Resilience – the ability to continue when finding work difficult and to learn from successes and failures – is vital for success. Deliberate and persistent practice is also critical for success. In certain contexts, memorising facts and texts will provide important surface knowledge that can be built on more actively in the future.

4.3 The written curriculum: Schemes of work

All teaching needs to be carefully planned. Schemes of work (sometimes called scope and sequence documents) show what topics, content, concepts and skills the teacher is intending to cover and the order in which they will be taught. They also provide an outline of the learning journey and may show the activities that will be incorporated into the lessons. Schemes of work provide the teachers' interpretation and plan for delivering the syllabus.

Cambridge International produces schemes of work to support many of its syllabuses. These present one way of delivering the course but they are neither prescriptive nor exhaustive in their content – teachers are expected to adapt them to their own purposes. Many teachers prefer to write their own, working with department heads and other responsible managers. For an inexperienced teacher or department, the Cambridge scheme of work provides useful support. It can reassure the teacher that they are covering the topics, content, concepts and skills required by the syllabus. The Cambridge schemes of work can be particularly helpful in demonstrating how to structure and sequence learning in a logical and coherent way, throughout a unit of work and a whole year's learning. Schemes of work are working documents and can be modified based on feedback as it occurs while delivering the curriculum. They need to reflect the local context of the school and be based on the school culture, timetable, vision and mission.

Planning is a process involving a number of stages (see Figure 3). Good teachers tend to design their teaching backwards (see Wiggins and McTighe 2005).

- The scope and sequence documents help identify the context – how a particular lesson or unit fits into the broader written curriculum expectations.
- Teachers identify the knowledge and skills learners need to master – the learning goals or priorities for a unit of work.
- Next, they decide the method learners will use to demonstrate learning – the success criteria or evidence that will be used to measure this.
- Then they plan the learning experience – the activities learners will use to master the content and skills being taught.

While planning is a process completed before instruction, actual teaching must be sensitive to learning that is actually happening, with constant checks on learners' understanding. Teachers need to constantly review and adjust their teaching, being prepared to adapt and change their plans based on the evidence of student learning. In this way the experienced curriculum can be aligned with the taught and the written curricula.

Evaluating the written curriculum, linking it to the taught and experienced curricula is an important part of teacher evaluation considered in Chapter 6.



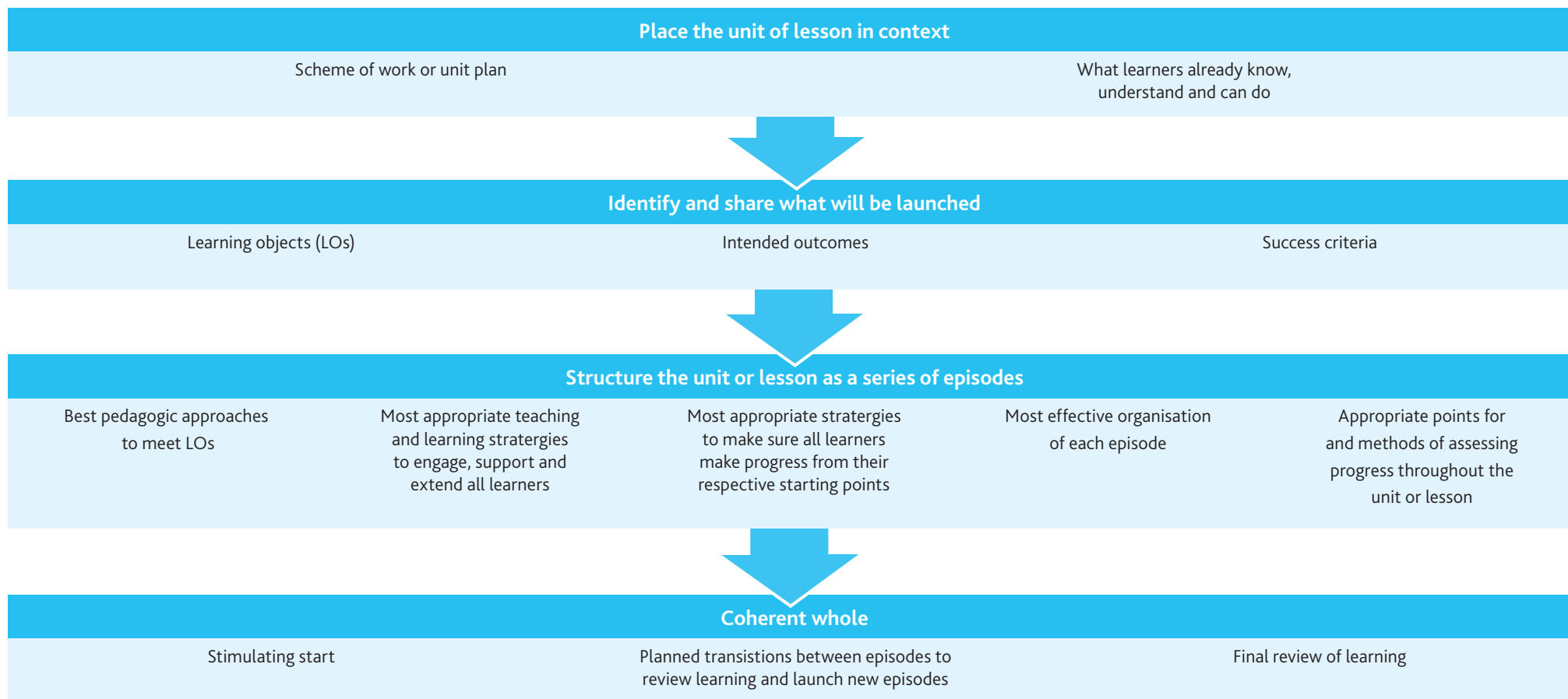
4: Teaching Cambridge programmes continued

Table 4: Cambridge learner and teacher attributes

Cambridge learners	Cambridge teachers
<p>Confident in working with information and ideas – their own and those of others. Cambridge learners are confident, secure in their knowledge, unwilling to take things for granted and ready to take intellectual risks. They are keen to explore and evaluate ideas and arguments in a structured, critical and analytical way. They are able to communicate and defend views and opinions as well as respect those of others.</p>	<p>Confident in teaching their subject and engaging each student in learning. Cambridge teachers know their subject well and know how to teach it. They seek to understand their learners and their educational needs. They strive to communicate a love of learning and to encourage students to engage actively in their own learning.</p>
<p>Responsible for themselves, responsive to and respectful of others. Cambridge learners take ownership of their learning, set targets and insist on intellectual integrity. They are collaborative and supportive. They understand that their actions have impacts on others and on the environment. They appreciate the importance of culture, context and community.</p>	<p>Responsible for themselves, responsive to and respectful of others. Cambridge teachers are highly professional in their approach to teaching and they are collaborative and supportive. They understand their actions will help shape future generations and they are concerned about the holistic development of every individual they teach.</p>
<p>Reflective as learners, developing their ability to learn. Cambridge learners understand themselves as learners. They are concerned with the processes as well as the products of their learning and develop the awareness and strategies to be lifelong learners.</p>	<p>Reflective as learners themselves, developing their practice. Cambridge teachers are themselves learners, seeking to build on and develop their knowledge and skills through a virtuous circle of reflection on practice – involving research, evaluation and adaptation. They support students to become independent and reflective learners.</p>
<p>Innovative and equipped for new and future challenges. Cambridge learners welcome new challenges and meet them resourcefully, creatively and imaginatively. They are capable of applying their knowledge and understanding to solve new and unfamiliar problems. They can adapt flexibly to new situations requiring new ways of thinking.</p>	<p>Innovative and equipped for new and future challenges. Cambridge teachers are creative, experimenting with new ideas and pursuing an enquiring approach in their teaching. They are open to new challenges, being resourceful, imaginative and flexible. They are always ready to learn and apply new skills and techniques.</p>
<p>Engaged intellectually and socially, ready to make a difference. Cambridge learners are alive with curiosity, embody a spirit of enquiry and want to dig more deeply. They are keen to learn new skills and are receptive to new ideas. They work well independently but also with others. They are equipped to participate constructively in society and the economy – locally, nationally and globally.</p>	<p>Engaged intellectually, professionally and socially, ready to make a difference. Cambridge teachers are passionate about learning within and beyond the classroom, sharing their knowledge and skills with teachers in the wider educational community.</p>

4: Teaching Cambridge programmes continued

Figure 3: The planning process



4: Teaching Cambridge programmes continued

4.4 Teaching skills and content

Cambridge programmes are designed to develop and consolidate student understanding of the subjects they are studying. This requires students to learn content knowledge, develop conceptual understanding and the skills needed to apply their understanding and solve problems. Skills are related to specific contexts and tasks and are developed through, and embedded in, subject content knowledge. The more demanding the qualification level, the more complex the material and the deeper the level of understanding students will need to demonstrate. Higher-order thinking skills are identified in Cambridge syllabuses and include analysis, synthesis and evaluation based, for example, on Bloom's taxonomy of educational objectives (Bloom et al 1956).

The development of understanding, supported by complex thinking skills, takes considerable time and practice. Skill development always occurs in a particular context and is not easily transferred from one situation to another even within a particular subject. When learning something new surface understanding needs to be developed first, including basic knowledge and simpler skills, before the student can proceed to more complex tasks. One implication for teaching and learning is that a spiral curriculum, where students frequently re-visit concepts and practise their skills at higher levels and in new situations, will help both consolidate and develop student learning. This is the approach Cambridge International supports.

Content and skills are described in syllabuses. These, together with specimen papers, teacher support materials and mark schemes, inform teachers about Cambridge curriculum and assessment standards. Understanding how Cambridge assesses student understanding, identifying what constitutes excellence in a particular qualification, is absolutely critical to effective teaching. It is vitally important that teachers new to Cambridge develop their understanding of Cambridge programmes and standards, not only through familiarising themselves with the materials Cambridge International provides but also attending subject-specific Cambridge professional development.

Cambridge teacher support material also provides important information to teachers and gives guidance about how the Cambridge learner attributes can be developed. Developing the learner attributes supports students to become independent and effective learners, thereby also improving their ability to perform well in Cambridge assessments.

Interdisciplinary curriculum mapping

It is essential to establish coherent and consistent planning processes to deliver Cambridge programmes. In addition some schools choose to go beyond this and map inter-disciplinary links between subjects. This involves horizontal planning across a particular year group to consider the relationship between what a student is learning in all their subjects at a particular point in time. In this way teachers can help students make connections between what they are learning in different subjects. This reinforces learning and helps students to see that human knowledge and understanding transcends individual subjects.

Coordinating the different schemes of work teachers are using enables cross referencing. In history a topic being taught might link up with a book being studied for English. The maths teacher might agree to teach a topic, for example statistics, at a time that reinforces what the science, business studies, economics or geography teacher is teaching. The possibilities are endless.

Interdisciplinary planning is often coordinated by a head of year who is responsible for examining the curriculum across all subjects and helping to establish links. Curriculum-mapping software is available that helps teachers view what others are planning and consolidates the whole curriculum. The results can then be examined for meaningful links.

Curriculum mapping does not need to be complicated. It is better to make a few meaningful links than to try and force links that are not natural. Another approach that can be adopted instead of, or together with, curriculum mapping is providing time in the calendar or timetable for students to work on interdisciplinary projects, facilitated by their teachers.

Cambridge Global Perspectives®, at both Cambridge IGCSE and Cambridge International A Level, is specifically designed to help develop interdisciplinary

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understanding. By studying global issues, learners explore different and often opposing perspectives to develop critical thinking, research, communication and collaboration skills. The learner develops an informed curiosity and understanding of the world, becoming more able to transfer these skills to their other content-based subjects.

4.5 Developing a culture of reflective practice

Experience alone does not necessarily lead to learning; deliberate reflection on experience is very important (Loughran 2002, p. 9). Through reflection, learners can translate experiences into deeper learning that improves their overall effectiveness as learners. In *Visible Learning* (2009, p. 22), John Hattie argues that the "... biggest effects on student learning occur when teachers become learners of their own teaching, and when students become their own teachers". The self-regulatory attributes that Hattie argues are the most effective for learners, such as self-monitoring, self-evaluation, self-assessment and self-teaching, are also essential for teachers as learners.

In the reflective classroom the processes, as well as the products, of learning become an object of attention (see table 5 for some examples of teaching strategies that promote reflection). Teachers actively encourage learners to take time to step back and to:

- reflect on what they have learned
- compare intended and actual outcomes
- evaluate the strategies they have used
- establish and analyse connections and relationships with other areas of learning
- create meanings
- think about how to apply what they have learned to new situations.

4: Teaching Cambridge programmes continued

Table 5: Some strategies for promoting the attitudes and skills of reflective learning with students

Reflection on assessment criteria. What does excellence look like?	Share the intended outcomes and success criteria with learners so that they can assess their own progress towards the objectives.
Scaffold learners' responses	Push learners to think more deeply through targeted questions and prompting.
Revisit, review and consolidate learning	Review learning and progress regularly, including providing opportunities for learners to restructure their newly acquired skills, knowledge and conceptual understanding into further evidence of learning, for example, short presentation, essay, revision notes.
Silent thinking	Give learners time to think and reflect independently before asking them to comment or to write in their log or journal about what they have learned from the activity undertaken.
Teacher models reflection	Teachers can help learners by sharing their own reflections on what they have learned from an activity, lesson or unit of work and so model the reflective process, including listening skills; thoughtful, exploratory questioning; and deep thinking.
Learner self-evaluation and/or Learning logs and journals	<p>Ask learners to write a self-evaluation as part of the reporting process, explaining:</p> <ul style="list-style-type: none"> • what they have learned about how they learn • what they need to do in order to improve • what challenges they have encountered • how they might overcome these. <p>If used on a regular basis, learning logs and journals build in an expectation that the learner will reflect regularly, not only on what they have learned, but also on what they have found challenging, and strategies to improve learning.</p>
Create steps towards problem solving	Involve the whole class in reflecting on the steps they took to solve a problem set and then 'build a ladder' of steps for the next time they undertake a similar activity.
Interviews	These might be peer-to-peer or teacher-to-learner interviews. They not only encourage learners to share reflections but also help to develop learners' skills of active listening, questioning and communication as well as deep thinking. This type of activity is particularly successful if the teacher models the thought process and encourages the whole class to design examples of effective questions to ask before learners engage in interviews themselves.
Reflective conversations	In small groups, pairs, or as a whole class, discuss the processes in which learners have been engaged. Teachers might ask learners to share their thought processes, detail the problem-solving strategies they used and reflect on the strategies to assess their effectiveness before reporting back to the whole class. These conversations should encourage learners to listen actively and to learn from others' reflective practices.

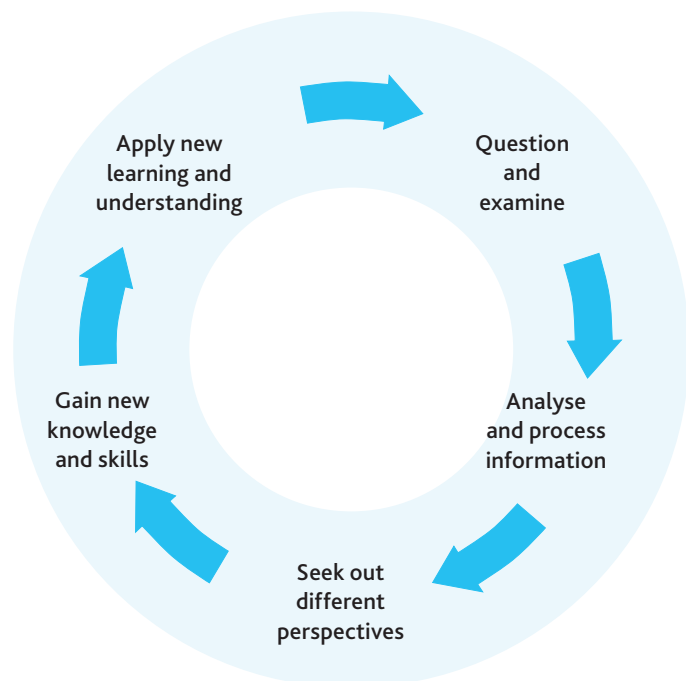
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Reflective teachers constantly question, analyse and self-evaluate their effectiveness as teachers and use this to identify new knowledge and skills they need (see Figure 4).

They ask themselves questions including:

- What worked in this lesson/unit of work?
- How do I know? What sources can I use to provide me with information?
- What would I do the same, or differently, if I was planning and teaching this lesson again? Why?
- What new knowledge or skills do I need to make improvements?
- How will I gain these? Research? Collaborate with other teachers?

Figure 4: The reflective cycle



Providing teachers with opportunities to reflect on practice, discuss their learning, learn from each other, and develop knowledge and skills collaboratively helps to foster this supportive climate for reflective practice that is so important for professional learning. Possible ways to encourage this practice may include:

- promoting a 'buddy' system for teachers to reflect and learn in pairs
- establishing cross-subject teaching and learning study groups, with sharing reflection on practice included as a regular agenda item encouraging specialist subject teachers to meet weekly or at the end of each unit of work to reflect on experiences together and to plan for improvements
- peer planning, observations of classroom practice and evaluation
- small-scale classroom studies of different teaching strategies and skills for promoting reflective learning
- developing case studies about the attitudes and skills of teachers and students as reflective learners.

Reflective teaching requires teachers to evaluate their own strengths and areas for development. This can be the starting point for creating a personal professional development plan (see Chapter 7). This process is also an integral part of the teacher evaluation processes that we consider in detail in Chapter 6. If teachers are used to the practices of reflection, self-evaluation and planning for improving their skills, they are likely to be more comfortable with, and supportive of, these practices as part of teacher evaluation systems. Personal professional development plans will also be useful when coaches work with teachers to help them concentrate on, and track progress against, identified and agreed areas for improvement.

4.6 Differentiated learning

"Differentiation doesn't ask teachers to begin by individualizing instruction. In other words, it doesn't call for teachers to create 20 tasks for 20 students who will come to class tomorrow. It asks teachers to look for patterns of need" (Tomlinson 2010).

One question that is often raised by Cambridge teachers concerns how to stretch all students in a large class, meeting the needs of the less able as well as the talented at the same time. How can teaching and learning be differentiated so that every student is working at their level, given work that is challenging for them but achievable given

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their current level of understanding? There is no easy answer to this question. Cultural influences and expectations have a powerful influence on what happens in classrooms. Every school and every teacher must engage with this question because it is an important expectation in lesson planning and teaching that all learners can achieve their full potential.

Differentiated learning is characterised by having challenging objectives, ambitious individual and class targets, accurate, regular and robust assessment to check, track and support learning followed by prompt and targeted intervention where needed. Teachers should use ongoing formative assessment to identify learners' needs and to refine their teaching to meet these needs as learners change and develop. The following practices can be helpful in supporting differentiated learning:

- Use a variety of teaching strategies and approaches to engage all learners.
- Design activities that are interesting, stimulate deep thinking and challenge learners.
- Check learner progress on an ongoing basis and adjust strategies in response.
- Plan different ways for learners to engage in and demonstrate their learning.
- Try to include 'real-world' applications for what learners are learning.
- Use different groupings as appropriate e.g. whole class, small groups, pairs, individual, and change these as needed (flexible grouping).

It is possible to support differentiated learning during whole-class instruction provided all students are engaged. The reality in many classrooms is that teachers constantly select the same students to contribute to classwork. These students tend to be the most enthusiastic and confident. It is critical to develop a culture of learning in which all students understand that everyone's voice is important and incorrect answers are nothing to be embarrassed about. Through listening to students, as well as assessing their written work, teachers will be able to identify patterns of need.

Teachers should vary whole-class instruction with smaller groupings of students. These can be particularly useful for making learners more confident in working collaboratively. They might include:

- **Grouping according to need on a short-term basis.** For example, a teacher may group in order to address learners' specific reading or writing skills and strategies.
- **Structured or random grouping.** This makes sure that learners work collaboratively

with different learners in the class to experience a range of views and opinions beyond their friendship groups.

- **Paired working to facilitate discussion.** One example of this is 'think, pair, share', where learners are given time to think individually. They then join with a partner to discuss and develop ideas, and finally share with the whole class.
- **Short-term regrouping across a whole grade or year group.** This allows choice and increases motivation, or makes the best use of teachers' strengths. For example, in physics, classes might be regrouped for a few weeks to study a particular unit with a teacher who has a particular interest and greater expertise in this area.
- **Guided learning groups.** This is where teachers target their support to small groups within the classroom and 'guide' their learning. A teacher will usually plan guided sessions over a sequence of lessons to make sure that all learners benefit from the approach. The approach can also be used to respond to immediate needs by intervening at the point of learning. For example, it may become clear through formative assessment that a group of learners has a particular barrier to learning that needs to be addressed. Teachers will, of course, need to make sure that they provide other learners with appropriately challenging work and a range of resources and self-help strategies to support them. It is also important that all learners are given time to reflect and then report on their learning and progress in the whole-class session.

When supporting teachers to plan for differentiated learning it is important to consider whether the learning environment is flexible enough to allow a wide range of teaching and learning activities. Are there areas in the classroom or corridors to provide working spaces for independent work or pairs? Do learners and teachers have easy access to learning resources? Can the furniture in the classroom be rearranged easily to allow for small-group working? Schools and teachers must create stimulating learning environments that support and promote active, differentiated learning.

4.7 Teaching with new technologies

Existing and emerging technologies can provide many stimulating opportunities to enhance active learning. However, they need to be carefully planned like any learning activity. In the information technology enabled classroom, providing additional sources of knowledge and information means learners are less dependent on the teacher. They

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can use the technology to control and pace their own learning, taking an active role. They are able to make choices and decisions independently and collaboratively.

A critical competence that learners will need to develop in order to use technology effectively and wisely is information literacy. This is the ability to evaluate information and online material for its usefulness in answering particular questions, and use it in their own work in appropriate ways. One common mistake in classrooms is that teachers do not spend enough time helping students develop this competence, assuming everyone knows how to use the internet. Information literacy is an interdisciplinary skill. It can be supported simultaneously by a number of teachers in different disciplines teaching the same skills and expecting the same standards. Having an information technology policy will help identify responsibilities in this area. It should identify clear expectations, supported by an information literacy curriculum taught by a number of different teachers.

New technologies can be used to support teaching and learning by:

- giving learners more control of their own learning, more opportunities to set their own goals and providing support for reviewing and assessing their own learning
- providing opportunities for learners to learn in alternative and challenging ways, using a wide range of sources of information and techniques to support critical thinking
- providing additional opportunities for learners to demonstrate evidence of learning, for example a blog entry, wiki creation and use of multimedia
- providing vivid examples of 'real world' situations for learning that increase student engagement
- providing primary sources of data
- helping learners to work collaboratively, even when at a distance from their peers
- helping teachers to view, assess and provide feedback on learners' individual and collaborative work, in school and at a distance
- helping learners to see patterns and behaviours more clearly
- helping teachers to facilitate whole-class discussion regarding first-hand observations, and encouraging learners to consider issues raised by their observations within a wide range of contexts

- helping teachers to collaborate to improve schemes of work, unit plans and lesson design
- helping teachers to support learners to review, refine, re-draft and modify work in progress
- helping learners to improve their attainment through refining and presenting their ideas more effectively and in different ways
- supporting teachers and learners to improve their presentation of work.

There are also many advantages of using new technologies for teachers' own learning and for the support they give to learners. It is easy for teachers to share resources, expertise and advice with other colleagues within a school, between schools or even internationally, using online professional communities and social media sites. Using technology to interact and share resources can make sure that planning for active learning and its assessment is thorough and effective without taking too much teacher time. Teachers can design web-based assignments for schemes of work and unit plans collaboratively, and build formative and summative assessments into these. They can record electronically a learner's assessment data, the feedback the teacher has given, and the action the learner has taken in response. This makes tracking learner progress and setting individual and group targets for learning easier. Teachers and learners can email classwork and homework. Video-conferencing between schools can support student and teacher learning.

There are pre-conditions for using new technologies in and beyond the classroom. The most fundamental is that a fast, reliable internet connection is essential. It also requires learners and teachers to have easy access to new technologies, and this can be costly for the school. However, the use of BYOD (bring your own device) and low-cost tablets, and the availability of the cloud network (which eliminates the need for software installation, servers and local file storage) can help to reduce the impact on the school's budget.

5: Improving student learning through assessment and feedback

“ For assessment systems to enhance learning – and not just measure it – students need to be at the centre of the assessment framework. To become lifelong learners, they need to be able to assess their own progress, make adjustments to their understandings and take control of their own learning. ” (OECD 2013, p 220).

Excellent schools give a great deal of attention to improving the quality of their assessment practices. Assessment is not only critical in measuring achievement standards. It also helps students understand their own strengths and limitations, and know what they need to do to improve. Because of its significance to learners, teachers and parents, it is important to have a clear assessment policy.

This chapter looks at assessment that is used to support learning. This includes feedback teachers give to students in day-to-day interactions as well as marks, comments and reports they produce. A section of this chapter looks at how teachers can provide valuable oral and written feedback to students. Feedback that teachers get from students' comments in class and work is critical in helping them understand how the learner is thinking. Assessment information needs to be recorded and tracked in a way that is meaningful.

This chapter suggests that criterion-referenced reporting against clear learning and assessment objectives is a good approach that helps make learning progression understandable. Teachers need to be sure they have a common understanding of assessment standards so we briefly consider standardising teacher assessments. Using assessment data is important for the school development planning process as well as reporting to parents and other stakeholders.

5.1 Developing classroom assessment practice

Assessment is central to the teaching and learning process in the classroom, not only to measuring student achievement and progress. The following different uses of assessment are often distinguished:

- **Formative** – assessment activities which are used primarily to help student learning by providing feedback during the learning process. This enables teachers and/or learners to modify teaching and learning activities to improve learning.
- **Diagnostic** – activities which identify learning difficulties or issues and indicate where help or change is needed.
- **Summative** – an assessment of learning that has taken place at the end of a course or unit of study. This is designed primarily to measure achievement but could also involve ranking, certifying competence or accountability.

Harlen (2012, p. 98) believes it is better to describe assessment purposes and practices as a dimension. At one end are informal formative procedures which directly influence the next steps in learning. These are characterised by immediate feedback as a normal part of classwork, and usually not planned in advance. This broadly corresponds to assessment for learning in the sense Swaffield (2009, p. 8) describes: “*Assessment for learning's prime concern is with the here and now of learning. It occurs in the flow of activity and transactions occurring in the classroom. The focus is on the learning of these students now, although there is also consideration given to their learning in the*

5: Improving student learning through assessment and feedback continued

future.” Formal formative processes are more structured. An example might be a brief test planned for the whole class, with feedback into the teaching of that class. Informal summative assessment might be a more structured process that is primarily used to monitor progress. Formal summative assessment would be a higher-stakes text or exam. The distinction between formative and summative is largely based on considering what the assessment is used for. In practice, summative assessments that are primarily designed to assess learning at the end of a learning episode can, and in many cases should, be used formatively as well.

A further important consideration is raised by Carless (2011). He points out that more ambitious interpretations of formative assessment aim to help students accurately evaluate their own work, develop motivation, metacognitive awareness, self-regulation and independence. He describes this as extended formative assessment. Restricted formative assessment, in contrast, has the more limited purpose of feeding back into the teaching and learning process relating directly to the course of study and assessment expectations.

Carless argues that how far the more ambitious extended aim can be implemented will depend very much on the school context and culture. Schools need to be sensitive to this:

“Although extended formative assessment is more theoretically desirable than restricted formative assessment, it risks being viewed by some teachers as too difficult to implement within their own educational setting because facilitating factors are not in place ... when pedagogy is dominated by testing then formative assessment needs to take credence of that reality” (Carless 2011, p. 107).

This is a very good example of how schools need to consider their own context in terms of prioritising developments. Consider the example of a school working in a culture where the existing pedagogy is predominantly direct, teacher-led instruction, and pressure on teachers and students is for immediate good test results. A more effective and realistic strategy will be to focus initially on restricted formative assessment and do this really well. This presents a win-win situation as the formative assessments will be designed to support learning that will result in good summative assessment performance. As assessments are designed to test a broad range of higher-order thinking skills, students will still need to understand the specific assessment criteria,

their application and their own performance in relation to this. They will at least start to develop a more sophisticated understanding of what constitutes excellence in a particular discipline and what they need to do to improve. Developing good restricted formative assessment practice over time will then make it possible for this to be more ambitious and extended in the future. Trying to move too quickly may alienate teachers and parents, and slow progress.

Assessment for learning (or informal formative assessment) involves activities that support the learning that occurs naturally in class. It is a continuous process and should be viewed as an aspect of effective teaching practice. More structured formative assessment activities and summative assessments that are also used formatively need to be regular and planned in schemes of work and lesson plans. Teachers always need to be clear about how they will review and use the resulting data before the assessment takes place.

5.2 Assessment policy

Because of its critical importance, a whole-school approach to assessment should be adopted that involves teachers, learners and, where meaningful, parents. This approach focuses on developing a clear understanding of the purposes of assessment and the values, practices and procedures the school uses.

Developing and implementing a whole-school policy for assessment will help to ensure that systems for assessing learning have an impact on the quality of teaching and learning across the school, and are understood by teachers, learners and parents. One important first step is to agree a common understanding of different types of assessment and how they can be used effectively to promote learning in each classroom. It may also be necessary and desirable to engage in further research and in whole-school training for the effective use of assessment to support learning.

An assessment policy should provide the structure for the school's approach to assessment. It will identify the framework through which learners' progress can be monitored, summarised, recorded and reported. It also needs to overlap with the school's policies for teaching and learning, and the policy and procedures for marking and reporting.

5: Improving student learning through assessment and feedback continued

A typical policy for assessment will include:

- a brief explanation of the purpose of assessment and uses of assessment
- a clear statement about what is valued in assessment – this should include reference to broader educational objectives, including the development of the Cambridge learner attributes
- what learners should expect from assessment
- planning for assessment
- assessment processes
- responsibilities (who needs to do what)
- guidance on marking and providing feedback to students
- guidance on reporting, providing feedback to students and parents
- the school's marking policy
- guidance on portfolios of work
- details of which assessment data will be shared with parents, in what format and how frequently.

The policy should also be accessible to key stakeholders such as parents, who will want to understand how their children will be assessed or evaluated (see Chapter 3 on school policies).

5.3 Supporting student learning through formative assessment

Well-designed and applied formative assessment has a significant positive impact on learners' motivation and achievement. It also supports their ability to work independently. In a good school, formative assessment will be embedded in day-to-day classroom practice. Where this is the case, learners have a clear understanding of what they are learning as well as the standards towards which they are working. There are frequent discussions about how students' work meets assessment criteria, both between the teacher and learners and between the learners themselves. Specific and clear feedback helps learners to understand and evaluate what they have done to meet the criteria so far and what they need to do next. Students are encouraged to become reflective, curious learners, confident in assessing their own and others' progress, knowing that they will be supported in their next steps to achieve the standards set.

Formative assessment activities will range from very informal but rich interactions, for example a student going over their work with a teacher, receiving verbal feedback, to more structured assessments, for example unit tests. Classroom assessment should be:

- **Relevant** – relate directly to the learning objectives and the course and syllabus standards.
- **Appropriate** – give the information that is required. Teachers will almost certainly need to use a variety of methods to assess different assessment criteria and learning objectives.
- **Fair** – assume that all learners can make progress, regardless of their starting point, and provide them with the opportunity to demonstrate what they know, understand and can do.
- **Reliable** – provide an objective and accurate check of learners' skills, knowledge and understanding at the point of assessment.
- **Informative** – establish where learners are in their learning, i.e. what they already know, understand and can do. This information should then be used to diagnose what each learner needs to improve and how the teacher can support this. Where this information is gained during a lesson, it may lead to immediate changes to the lesson plan. Or, where it is gained from a series of lessons or unit of work, it may lead to revisions in course plans or schemes of work.
- **Integrated into the lesson and teaching and learning cycle** – the reflection on learning and progress by learners and teachers will provide evidence that guides the next steps to be taken and provide motivation for future progress in learning.
- **Manageable** – assessments should be integral to classroom activities. The recording of these assessments needs to be time efficient and the information provided needs to be valuable for improving learning.

Table 6 provides examples of some teaching and learning strategies that support assessment for learning. In addition to ongoing feedback on class activities, assessment tasks need to be selected that provide an accurate understanding of learners' current strengths, limitations and needs. Teachers will need to collect assessment data from a range of appropriate activities and tasks – this will depend on the subject being studied and the level of the programme. These are likely to include class tests, student written work completed at home and/or in the classroom, student responses to structured

5: Improving student learning through assessment and feedback continued

questions, oral responses, project work, portfolios, presentations, creative work and exhibitions.

5.4 Using assessment data to improve learning

Using multiple sources of evidence/assessment data helps to 'triangulate' data. This means that evidence from different sources is compared to generate a richer and more accurate picture of students' understanding (see Figure 5). This can be particularly useful for developing hypotheses and educated guesses for what approaches may be most effective for the next stage of learning.

The two examples 5A and 5B illustrate how triangulating data can help teachers to identify students' needs and prioritise what to do next. Using summative test data formatively, to identify where learners performed well and where more depth of understanding is needed to improve attainment, helps teachers to recognise how they might need to adjust lesson plans, unit plans and schemes of work. Using a variety of data from classroom assessments as well, teachers can be more confident in deciding what needs to change in order to improve learning. Whenever changes to curriculum plans, or to teaching strategies teachers use to deliver those plans are made, it is important to review and evaluate the success of those changes.

Table 6: Examples of classroom practices and assessment in support of learning

Characteristics of classroom assessments	Teaching and learning strategies
Teachers recognise that assessment for learning is integral to and an essential aspect of teaching for learning. They understand that it provides learners with the skills and strategies to take the next steps in their learning and plan their schemes of work and lessons accordingly.	<ul style="list-style-type: none"> Integrate assessment activities into schemes of work. Plan each scheme of work, series of lessons and individual lessons backwards: <ul style="list-style-type: none"> Identify what learners need to be able to do with what they will learn – the learning goals or priorities for this unit of work. Decide how you will know that learners have achieved the learning goals set – the evidence that you need and the methods for gaining this. Plan the learning experience – the scheme of work, unit plan, individual lesson, or the next episode in the lesson. Plan the points for and methods of assessment.
Teachers share learning objectives (learning intentions) with learners.	<ul style="list-style-type: none"> Share clear and age-appropriate learning objectives at the beginning of the lesson/series of lessons and, where appropriate, during the lesson. Use these objectives as the basis for questioning and feedback during the lesson and at the end. Evaluate learner progress against the learning objectives for assessment of learning and for informing the next steps for learning.
Teachers establish what learners already know through classroom activities that show evidence of learning.	<ul style="list-style-type: none"> Refer to individual learner assessment data, including records of feedback on previous work and actions taken by learners in response. Use a 'recall' question-and-answer session to check prior learning with strategies such as: <ul style="list-style-type: none"> Each learner is provided with a mini white or blackboard so that they can all respond to a question at the same time when prompted. Teachers can see at a glance who has the knowledge and who needs further support. "Here's the answer, what's the question?" e.g. "The answer is 42. What could the question be?" This strategy can quickly encourage learners to think more deeply and to make connections. Use questions that require higher-level thinking and allow time for this thinking before accepting any answers, e.g. instead of "Draw an isosceles triangle", ask learners to "Draw four different triangles. Now explain what is similar and what is different between each of them". Traffic lights or thumbs up to show recall and follow up with questions to check understanding.

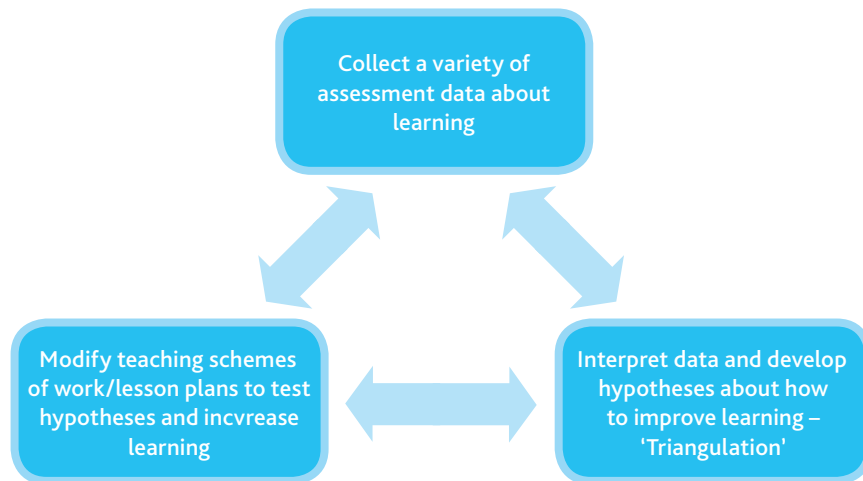
continued

5: Improving student learning through assessment and feedback continued

Characteristics of classroom assessments	Teaching and learning strategies
Teachers help learners to know and understand the standards they are aiming for by sharing assessment and success criteria routinely.	<ul style="list-style-type: none"> • Share examples of work that have met assessment criteria with learners and help them to understand why these are good examples. • Give learners clear success criteria related to learning objectives. • Model what a successful piece of work will be like, for example, complete an activity as a whole group. • Make sure that learners understand expectations of the presentation of work. • Display learners' work that is good 'in progress' as well as completed.
Teachers involve learners in self-assessment and peer assessment.	<ul style="list-style-type: none"> • Encourage learners to talk about what they have learned and what they found challenging in relation to the learning objective as well as the activities undertaken. • Give learners opportunities to work collaboratively and discuss their work, focusing on how they can improve. • Ask learners questions that encourage them to explain their thinking, e.g. "Can you tell the rest of us how you got to that answer?" • Make sure it becomes commonplace for learners to reflect on what they have learned. • Identify with learners the next steps in learning.
Teachers provide prompt oral and written feedback on learning that leads learners to recognise what they need to do next and how to do it.	<ul style="list-style-type: none"> • Value information on learner progress provided by oral feedback as well as written. • Make sure feedback is constructive, specific to each learner (does not make comparison with other learners) and identifies what the learner has done well in addition to what he/she needs to do to improve and how to do it. • Provide time and support for learners to act on the feedback given. • Identify the next steps in learning for groups and individuals.
Teachers promote learner confidence and make it clear that all learners can improve and will be supported to do so.	<ul style="list-style-type: none"> • Identify small steps for learners so that they can see their own progress and gain confidence as a result. • Create a classroom environment for learning that is supportive, where a wrong answer is turned into an opportunity for learning, where thinking and exploration is highly valued and where learners are encouraged to take risks.
Teachers reflect on, review and evaluate assessment data with learners.	<ul style="list-style-type: none"> • Choose learning activities that provide quality information, with an emphasis on process rather than just the outcome. • Encourage learners to reflect on the process of learning with other learners and with the teacher. • When planning lessons/units of work, build in time for learners to reflect on their learning, and to recognise where they are less secure. • Adjust schemes of work/lesson plans/resources in response to information provided by assessments. • Encourage learners to be owners of their learning.

5: Improving student learning through assessment and feedback continued

Figure 5: Using assessment data to improve teaching



The two examples 5A and 5B also illustrate the benefits of teachers working collaboratively in collecting and interpreting assessment data. Benefits include:

- refining and developing effective teaching strategies and practices over time
- receiving feedback from others about tentative conclusions reached and how best to proceed
- establishing common assessment practices
- establishing common expectations of learner performance
- developing understanding of the needs of individual learners and agreeing how to support identified needs
- recognising when it is not the teaching strategies that need to be adjusted but rather the curriculum plans that need improving, for example more time needs to be spent on reinforcing a skill, and when it is both.

Example 5A

A teacher shares the learning objective with her class: “We will be able to recognise layers of multiple meaning in a text”. She then hands out the short text that will be the focus for the lesson, which has some highlighted and annotated examples to help learners understand what they need to do. The teacher also discusses one of the examples and asks if everyone understands what they have to do. The teacher divides the class into small groups of mixed prior attainment, allocates each group a different paragraph from the text and tells them to highlight and annotate the text to demonstrate their understanding of the learning objective. Each group feeds back their points to the rest of the class and the outcomes are such that the teacher believes that each group has understood the learning objective and is ready to apply it to a different text.

However, an assessment of written work completed individually shows that most learners do not yet have sufficiently deep understanding and skill for them to take the next steps in their learning. When she shares the assessment information with other teachers who are teaching the same topic with the same grade, it is clear that most learners in other classes have achieved the learning objective and are ready to take the next steps in the scheme of work. The teacher forms a hypothesis as a result. She identifies that she needs to amend her teaching strategy for this learning objective to include more effective modelling and more prepared higher-level teacher questioning. After including these strategies in the next two lessons, she again assesses learners’ understanding and skill through asking learners to analyse two short texts from different media. This time, all learners in the class demonstrate that they are able to recognise layers of multiple meaning and have applied their learning to two, previously unseen texts.

5: Improving student learning through assessment and feedback continued

Example 5B

The teacher shares the learning objective with the class: "To understand the effects of water flow on the landscape" and uses enquiry-based, practical activities and some short film sequences to embed students' understanding and learning. In a question-and-answer session, learners demonstrate that they all understand and that most can apply what they have learned. The teacher then sets a second task to assess learners' progress towards achieving the learning objective. He asks learners to work in small groups to make a presentation for the whole class that demonstrates the effects of water flow on the landscape, and gives each group clear criteria for success against which they will assess themselves and be assessed by their peers. The self and peer assessments provide evidence of learners' understanding and ability to apply that understanding.

In the next lesson, the teacher sets a summative test taken from past external examination papers, which includes the topic studied. The written responses to the questions asked in this test reveal gaps in learners' knowledge and understanding that were not evident in the classroom-based assessments. When the teacher shares the assessment data and his experience with other subject teachers who teach the same topic and the same grade, their data and experience are similar. On this triangulated evidence, the team of teachers recognises that in-class assessment data provides evidence of progress against the learning objective set. This would suggest that it is not the teachers' delivery that is resulting in gaps in knowledge and understanding. They therefore form the hypothesis that the weak performance of learners in response to the external assessment task set suggests that the unit plan is not sufficiently detailed to support teachers in their delivery of each aspect of this unit of work and that they need to revise it.

5.5 Providing feedback on student work

Giving specific and clear feedback to learners on their work helps them understand their performance and what they need to do next. Feedback also helps students understand the standards against which their work is being judged, enabling them to become better in future at judging their own performance. A better term for the guidance given to students to help them improve their work is 'feed forward'. This is because it is about providing effective feedback to help the learner improve their next pieces of written work – to prompt them to think about 'What's next?' As Hattie and Timperley (2007, p. 86) argue, effective feedback should answer three questions for the learner: 'Where am I going?', 'How am I going?', 'Where to next?'

Feedback works in three directions:

1. **Teacher to learners** – the teacher gives guidance to learners about their current achievement and the next steps they need to take.
2. **Learners to teacher** – the teacher receives feedback from learners about their learning.
3. **Learner to learner** – peer assessment.

All of these are important. Peer-to-peer assessment against clear criteria can be highly effective in helping learners to understand what they need to do to improve their work as they analyse other learners' work. It is also important to appreciate that feedback is not a one-way process. John Hattie (2009) believes that the most powerful feedback is given from the learner to the teacher as it allows teachers to see learning through the eyes of their students. In the previous sections we considered how classroom assessment processes can support this direction of feedback.

Teacher feedback on student work needs to be:

- **Focused** – it should include two or three areas for improvement, referenced to the learning objectives.
- **Accessible** – it should be given in language that is appropriate for the age and competence of the learner. It should be unambiguous and clear.
- **Constructive** – it should include specific guidance for improvement and point towards the relevant criteria for success.

5: Improving student learning through assessment and feedback continued

- **Supportive** – it should be given in a positive tone and make clear the support that is available for the learner.
- Related to learning objectives and success criteria that have been shared with learners.
- **Challenging** – it should encourage the learner to think more deeply about what and how they are writing.

Giving oral feedback

Oral feedback is the most regular and interactive form of feedback, and can be a highly effective way of helping learners know what they need to do to move forward with their work. It can be targeted to individuals or groups but has the advantage that others can listen to what is said and learn from it indirectly. Oral feedback is usually spontaneous, but teachers should recognise that it needs to be detailed, personalised and provide the information learners need for it to be effective. So, developing approaches to giving oral feedback, and planning explicitly for its use within a supportive learning environment, are important to achieve its potential as a powerful tool for improving learning.¹

Oral feedback has some advantages over written feedback. It is:

- **Immediate and specific to the context** – misconceptions can be dealt with as they occur and in the context of the specific learning.
- **Dynamic and adaptable** – encourages discussion of ideas and can be adapted to respond to particular learning needs.
- **Ongoing** – a continuous and regular part of a lesson. It can also be used for transitions between learning episodes and to structure learning with reference to the objectives woven through the lesson.
- **Versatile** – questioning, modelling and explaining can all be used as strategies to provide feedback.
- **Stimulating and motivating** – learners enjoy immediate feedback and quick improvements can be made as learning is fresh.
- **Personalised** – facial expressions and positive body language enhance constructive advice.

The effectiveness of oral feedback can be improved by:

- making feedback both positive and developmental
- relating feedback to the learning objectives – and making sure the objectives and outcomes have been explored thoroughly when introduced
- establishing a supportive environment for learning so that learners want to share their thinking process with others and recognise that self, peer and teacher feedback helps them to identify ways they can improve
- encouraging learners to take risks and welcome challenge so that they do not always choose the easiest option and recognise that making mistakes provides learning opportunities
- planning learner groupings in advance to support the use of oral feedback, e.g. using guided ability groups for giving feedback on previously completed written work; using paired work for peer assessment followed by teacher feedback
- building in 'wait time' before and after questions or responses to encourage learners to think deeply and to expand on their response – and let learners know that you will do this routinely. Often teachers, or other students, talk on behalf of students who are being questioned if they do not respond immediately
- providing red, amber and green flashcards for learners to indicate the extent to which they understand the current learning objective
- encouraging other learners to reflect and question or comment before the teacher responds, then to use the appropriate specific learning outcomes/success criteria to assess their own and other learners' responses
- using prompts such as, "Can you say a bit more about that?" in order to make the process developmental and to modify feedback as appropriate
- targeting questions at specific learners and not just responding to students who put their hands up to answer, thereby ensuring everyone participates
- planning questions and tasks carefully to encourage higher-level thinking and responses so that feedback also contributes to progress in learning
- building in time for giving extended or structured feedback to individuals or small groups with similar needs, as appropriate

1. In their study of oral feedback that examined 3000 reports, covering nearly 13 000 learners, Kluger and DeNisi (1996) found that oral feedback raised achievement in 60 per cent of cases, but in 40 per cent was ineffective. The challenge for teachers is to make their spontaneous oral feedback more specific and to encourage deeper thinking and learning.

5: Improving student learning through assessment and feedback continued

- encouraging learners to reflect on the feedback then to act upon it in the lesson, e.g. through revising their work, and giving them time to do this
- checking back on actions taken in response to feedback to make sure that learners have understood and are making use of what has been said
- using learners' work to exemplify feedback (examples are often easier to understand), and encouraging learners to do the same
- thinking about offering coaching sessions to individuals or small groups to follow up feedback.

Giving written feedback

Traditionally, teachers spend hours marking learners' written work, correcting spelling and grammatical errors, and providing marks and comments. What matters is the quality and nature of this marking. The value of much marking in many classrooms is very limited. It can even be counter-productive if learners find it difficult to make sense of the grades and comments, and become discouraged and unsure of themselves. Learners also tend to focus more on the mark or grade and ignore comments made by the teacher.

When marking learners' written work, providing selective high-quality, detailed and informative marking will improve learning much more than superficial marking for all learners on every piece of work. As Black and Wiliam concluded (1998, p. 9):

"Feedback to any pupil should be about the particular qualities of his or her work, with advice on what he or she can do to improve, and should avoid comparisons with other pupils", and "Feedback has shown to improve learning where it gives each pupil specific guidance on strengths and weaknesses, preferably without any overall marks."

Principles and practices that define expectations for marking and written feedback need to be developed as part of the school's assessment policy. These should stress that:

- The learning objectives and learning outcomes should be used as the points of reference for written feedback and so should be shared and explored before learners attempt the task. Include assessment criteria in schemes of work and unit plans. Teachers must check that learners understand these.
- Feedback is given in relation to learners' performance against learning objectives and assessment criteria, and not the work of others.

- Written feedback should provide clear evaluation of learners' strengths and identify areas for improvement. It should prompt learners into deeper thinking and identify the next steps they should take.
- Teachers need to identify the next steps for learners. Focus on two or three points for improvement that will help to bridge the gap between present performance and future targets. This will require a good understanding of subject progression, described in scheme of work documents.
- Teachers will need to diagnose learners' misunderstandings and difficulties. These are likely to require further action and support, which they need to facilitate or seek extra help for.
- Agree the frequency of detailed written feedback in the whole-school policy and share the timings with all learners and parents. Informative feedback on selective student work is better than limited feedback on all student work. Subject areas need to identify the key pieces of work they will focus on.
- Agree how feedback on progress is shared with parents in the whole-school assessment policy.

How marks or grades are used also needs to be agreed. Black and Wiliam (1998, p. 9) believe that when pupils are given a mark, their ego responds and they react emotionally to the score. A lower than expected mark is seen as failure, whereas a better than expected grade leads to students feeling elated and keen to find out if they have done better than their friends. Either way, they ignore the teacher's comments. One effective practice that helps prevent this is focusing on assessment criteria, rather than providing overall marks. Assessment rubrics (tables showing how the assessment criteria relate to levels of student performance) can be extremely effective at showing what excellence looks like and how the student's work measures up to the different criteria.

A key consideration is developing learners' awareness about what they can do to improve their own work. This can be supported by providing opportunities for learners to think things through for themselves, by giving prompts or outlining the process they need to follow. Providing the time and support for learners to discuss, correct and develop their work following initial feedback is a valuable process. However, a balance has to be struck – teachers need to be careful that they are not directing students too much so that the final work is in fact their own.

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5.6 Recording and tracking progress and achievement

How and when assessment information is recorded should be a whole-school decision described in the assessment policy. Schools also need to decide how often data should be collected for tracking purposes (sometimes referred to as monitoring). It is important to note that recording and tracking is not the assessment itself but simply a means to help record and recall learners' progress and attainment. Assessment is the *“accurate and usable knowing and understanding of children, not the quantity or form of recorded information”* (Dubiel 2014, p. 9).

Deciding what to track and record is an important decision that needs to be clarified in the school's assessment policy. It will not be easy to measure everything that the school values, identified in the mission or vision statement. The danger with not monitoring or reporting on these broader learning objectives is that they will be valued less. Outcomes that are easily quantified, such as grades, may be prioritised. The challenge for senior leaders, teachers and learners themselves is to decide how they can monitor and track each aspect of learner progress towards objective learning goals, or targets – not just the knowledge and understanding that can be easily assessed through summative testing. The broader the range of assessment evidence, the more valid the judgements will be and the more accurate and valuable the progress tracking.

Another danger is placing too much emphasis on records and reports that compare students with other students (mentioned in the previous section). Students tend to focus on their position and grade rather than on what they need to do to improve. No matter where in a class rank order a student is placed, they can always improve. The highest-placed student may think they are doing very well, when it might actually be the case that they are very able and could do much better. Students lower down the class ranking order tend to be demotivated. The most important function of tracking is to serve the learner's needs by making sure that appropriate support is given for continued progress.

Tracking is useful for:

- providing information on what has been learned, what needs more attention and what needs to be learned
- supporting teachers to plan learning experiences and activities that will meet each learner's needs

- identifying when a learner is not making expected progress so that this can be addressed
- providing teachers and school leaders with information about the progress of individuals, classes, groups and whole grades
- providing teachers, learners, parents and school leaders with information about whether learners are on track to meet age-related expectations
- providing teachers, learners, parents and school leaders with information about whether learners are on track to meet objective learning goals mapped against skills and knowledge, and based on high expectations.

Learners should be encouraged to use assessment data to monitor their own performance and identify their next steps. When learners are supported to use their own achievement data and track their progress, it helps them to take ownership of their own learning and become more independent. They improve their ability to reflect on what they have learned and recognise what they need to do to achieve their next steps. They also feel more in control of their learning outcomes. Teachers can help learners to do this by sharing clear learning objectives, making assessment data easy to understand and use, explaining expectations and assessment criteria clearly and providing specific and constructive feedback promptly.

Recording progress and achievement: Criteria referencing

To track the progress of a class or an individual learner all teachers will have mark books or electronic records of assessments of work set. In many cases these records are numbers, grades or percentages that are of limited use to teachers, or learners, in identifying what students need to do to improve. Grades alone do not help identify the complexity of a task. If a student receives a grade A for a short factual test and a grade C for a long and demanding piece of work, for example an essay, how should the teacher aggregate these? Some recording systems simply treat them as the same and give the student a misleading average – in this case a B – as the final grade reported at the end of a period of learning. For this reason alone recording grades should be supplemented, or better replaced, by more detailed records relating to student performance against specific assessment criteria and learning objectives.

Cambridge teachers will become familiar with the assessment objectives and criteria used. These are described in syllabuses and mark schemes. Attending subject-specific training workshops is also important, particularly for teachers new to Cambridge.

5: Improving student learning through assessment and feedback continued

These will help them understand how the criteria are used to derive final marks and ultimately grades. Classroom assessment results should record students' performance and progress against the criteria, which the teacher can then track. Using assessment rubrics can be particularly helpful. These describe a set of criteria and standards linked to assessment objectives and describe different levels of performance in relation to these. The teacher can show the student their performance on the assessment rubric.

The teacher can record marks for performances against different assessment objectives and criteria, and then convert them into a grade at the end of a term or when reports are due. Students and parents will then receive marks relating to the assessment objectives and an explanation about how these are converted into a final grade. They will then understand how the final grade comes from a combination of assessment objectives and related criteria. In this way students can appreciate their relative strengths and weaknesses and understand what they need to do to improve.

Record keeping needs to be manageable, and performance does not need to be recorded after each activity in the classroom. Decisions about how much, as well as what, to record will be described in the assessment policy. It's vital to balance the right amount of information (avoiding excessive bureaucracy/time) with the need to monitor and evaluate the progress of each learner. Many schools will want to record the positive, constructive comments and advice teachers have given to each learner for improvement against the learning objectives and success criteria they have set. One way of doing this is for the teacher to keep a copy (paper or digital) of assessment rubrics returned to students which have been annotated by the teacher with comments.

There are a number of ways to record assessments. Some are more appropriate to specific subjects, and schools need to decide which to use:

- marks derived from assessment criteria relating to assessment objectives recorded in a teacher's mark book or electronically
- assessment rubrics with annotated comments
- a portfolio of a learner's work that has been assessed by the teacher
- the teacher's summary of marks, comments, next steps and advice for improvement
- a summary of achievement and progress, including marks and comments, against learning and assessment objectives. This might include comments by the learner. This would be completed periodically – monthly or termly, even weekly if this can be achieved without taking up too much time.

Processes chosen need to be easily understood by teachers, parents and learners and applied consistently across the school. Records need to clearly relate to what was assessed. They must also help judge achievement against clear criteria and help make comparisons between individual learners and between different groups of learners.

5.7 Standardising teacher assessments within subjects

Standardisation is a process designed to make sure that teachers' assessment of learners' work is fair, consistent and accurate. When used effectively, it leads to a shared understanding between all teachers in a subject area – they know what standards are required in that subject at a particular stage of learners' development, or their age. The most common method for standardising teacher assessment involves using samples of learner work. These help teachers agree on the levels of learning reached against the assessment criteria.

Creating robust systems for standardising teachers' assessment helps to make sure that:

- assessment of learning and attainment is accurate
- each teacher understands the criteria for assessment and applies those criteria fairly and consistently
- the approach to assessment within the subject is consistent as a result
- teachers, learners and parents have confidence in teacher assessments
- assessments are reliable and allow teachers, learners and parents to track learner progress with confidence
- target-setting processes can build on the reliability of learning assessments.

How can teacher assessments within subjects be standardised?

1. **Develop assessments and standards criteria collaboratively.** When writing schemes of work or unit plans, it is important to link assessment objectives with learning objectives and establish clear assessment criteria. Involving subject teachers, led by experienced colleagues, in developing and agreeing the standards criteria is a good first step. This will ensure that teachers understand and know the criteria, and agree the expectations of learner performance. Cambridge's published guidance helps with this.

5: Improving student learning through assessment and feedback continued

2. **Planned standardisation sessions.** Giving teachers time to work together for frequent and regular sessions focused on standardising assessments helps to embed standardisation throughout the school. One effective use of these sessions is for subject leaders to photocopy two or three unmarked pieces of work and distribute a set to each subject teacher together with the assessment criteria. Each teacher assesses each piece independently, identifying the characteristics of the criteria that the work illustrates. The whole team then reviews and evaluates the assessments and comments, before agreeing the refined assessment.
3. **Setting learners a common assignment.** One strategy that can be used for standardisation is for all subject teachers to set learners in the same grade the same assignment at the same point, for example, at the end of a unit. Teachers mark the assignments of their own teaching group (or of a different teaching group) against the agreed criteria. The subject leader or experienced teacher then checks the marking for consistency.
4. **Use the experience and expertise available.** In many schools, there are some teachers who have years of experience of assessing learners' work in their subject. There may also be some who have had training or experience in examining or moderating outside the school, for Cambridge or for other examining bodies. Wherever there are teachers with such experience, they can take the lead and help other teachers in their subject by, for example, assessing and commenting on pieces of work collected from different learners across a grade or year group. These assessments can be reviewed, discussed, and, where appropriate, refined with the subject team. This will help teachers to understand and agree the standards expected and the feedback that should be provided to learners. They can then be used as exemplar pieces for future assessments.
5. **Build up exemplary assessment material.** It can be very helpful to teachers and to learners to build up exemplars in the form of subject standardisation portfolios. These can include samples of assessed work, annotated with teacher comments that demonstrate which aspects of the work characterise the assessment criteria. Teachers can use examples from the portfolio with learners in lessons to help them understand how to meet standards set. They can also 'post' copies on the learning wall when appropriate.
6. **Use subject development time to share examples of work.** One effective use of subject development time is to share examples of learner work and to assess these pieces collaboratively. This will help to reinforce a common approach and consistent application. It will also give each teacher confidence in their ability to assess in line with other subject teachers.
7. **Develop a best practice guide.** To support and encourage a consistent approach to assessment across the school, as well as within subjects, it is worth considering developing a guide to good practice in assessment for all teachers. The guide could give detailed information on assessment processes in the school and in each subject area. It would also encourage teachers to share more detailed information than in the assessment policy.

5.8 Using assessment data for school evaluation and target setting

Assessment data should be used as one input into the school evaluation and development planning process. It can help schools understand their students, with a view to improving teaching and learning for all. Assessment data can compare performance over time and identify areas needing improvement. Target setting should be used to support whole-school, subject, and teacher plans to improve learners' performance. This should include:

- using quantitative and qualitative assessment data to focus plans on raising learner performance
- making sure learners' attainment is built upon, with a high level of value added at each stage
- identifying underperformance (of learners or subjects or grades) and focusing teaching on addressing this
- supporting improved learning outcomes for underachieving groups of learners and/or individual learners, and for extending high-performing students.

Curricular target setting helps to achieve this through focusing on areas of the curriculum that need development and setting targets for improved student learning. A curricular target expresses in words a specific aspect of the curriculum as a focus for improvement. It is supported by data. Targets may relate to groups of learners, a class or a whole grade, and be established over medium or longer-term horizons. The target

5: Improving student learning through assessment and feedback continued

might focus on quantifiable outcomes, for example: '100 per cent of Grade 11 learners will achieve Cambridge IGCSE English First Language A*–G; 70 per cent will achieve A*–C'. Or, it might refer to more qualitative outcomes, for example: '90 per cent of Grade 7 learners are able to select and justify the appropriate software for presenting information'.

Targets need to be translated into meaningful actions. This will make sure it is clear how they will be achieved and who is responsible, as described in Chapter 2. They will also need to result in changes to the planned written curriculum, schemes of work, and be appropriately resourced.

5.9 Using assessment data to report to parents and other stakeholders

Reports for parents

A school's stakeholders are, in the broadest sense, anyone who has an interest in the school and what it does. Beyond learners, teachers and parents, the governing board and/or school owners will want to know how well the school is doing. The reporting policy, which should be part of (or cross referenced with) the assessment policy, will clarify how reporting will operate. It is important to question the purpose and audience for reports when deciding how they should be designed.

Parents' main concern will be to understand how much progress their child is making. They want to see their child's achievements over the period, and compare their performance to others in the year group and against national and international standards and benchmarks. They will also want guidance on what they, as a parent, can do to help their child improve. Cambridge schools are expected to ensure that parents, as well as learners, understand the curriculum. It is equally important to make sure that parents are involved in and understand the progress that their children are making in school, both academically and more broadly.

As parents will want information related to their own children, the subjects they take and the teachers who teach them, the report will be focused on the individual learner. In addition to reports on individual subjects, include an overall summary commenting on progress across the curriculum. This may be provided by the class or grade teacher and endorsed by the principal. For the report to promote learning, this needs to be

followed by advice and guidance for the learner on what they need to do next to improve further. If the assessment policy is being effectively implemented in classrooms, these 'next steps' will not be a surprise to the learner – they will be taken from the most recent feedback given by and discussed with the teacher.

If they have a report that gives sufficient and quality information, learners and parents will be able to ask key questions at face-to-face meetings or through conference telephone or video calls. For example, they will be able to check that a teacher is providing good enough support for a learner to make good progress in a particular subject. If a learner is not doing as well in geography as in history, the learner and parent should have that information. They can then try to find out why that is the case and what the teacher and school are doing to improve the situation. In other words, they can hold the teacher and the school to account.

Reports for the governing board

The governing board and/or owner will want to know how well all students are doing. They may well be the first to congratulate the school on its successes. They may also be ambassadors for the school to the local community and beyond. However, they should also challenge the school on whether or not it is providing an excellent education. Reports to governing boards should provide them with the information to do this. Even if the board is not interested in too much data, the school's senior management (as part of the self-evaluation process) should be. Data should allow for comparisons across grades and over time – for example how well learners in Grade 10 are doing in mathematics compared with their performance in physics. It might be of interest to compare whether boys are making as much progress as girls in each grade. If your assessment data is recorded electronically, it should be straightforward to compile the data. The school, and its governing board, might also be interested in comparing attainment against local, national and international standards.

A good report for stakeholders should include all the information that the reader will want to know and understand. It should be brief and to the point.

5: Improving student learning through assessment and feedback continued

Data alone will not answer all the questions that stakeholders may have. For instance, a member of the governing board might notice that the attendance of learners in Grade 6 was better in term 3 than term 2. What they cannot tell is why this might be the case and, most importantly, what the school is doing to prevent the same issue arising in the next academic year. It is therefore important that data is accompanied by an analysis of what it is suggesting. The reader can then form a clear picture of what is going particularly well in the school and where there are areas of concern. Often too much importance is attached to performance in examinations. This can vary from cohort to cohort. Value-added measures are more reliable and helpful measures of progress over time.



Table 7: Some principles for reporting to parents

1. Make sure that the report is easy to understand. Use plain, everyday language. Avoid using technical terms that are only familiar to teachers.
2. Summative grades or marks are not informative unless they are accompanied with an explanation of what they mean a learner can do. It is good to:
 - a. include objective information about what has been taught
 - b. summarise learners' current knowledge, skills and understanding
 - c. include areas for development (specific next steps or targets)
 - d. consider, where relevant, referring to a portfolio of work that can be seen and discussed at a face-to-face meeting and/or include scanned or word-processed pieces of assessed work.
3. Show what progress a learner has made over the period since the last report (achievement). Focus on learning and progress rather than judgements.
4. Include what is expected of learners at a particular grade level. This will help parents check how well the learner is doing in comparison with others in the same grade.
5. Provide information about all areas of the learner's development. How well are they progressing socially as well as academically? Do they have the skills to work on their own? Can they concentrate for extended periods of time? Do they work and interact well with other learners? Do they have positive attitudes to learning and behave well?
6. Recognise effort and levels of engagement, as well as attainment.
7. Make it clear what parents can do to support their child's learning.
8. Include what teachers are doing and plan to do to support the learner(s) to make good progress.
9. Include data for attendance and punctuality.
10. Provide an opportunity for a face-to-face or video-conference discussion of learners' progress and of this report.

6: Evaluating teaching

Just as assessment that supports learning is critical for student development, teacher evaluation that focuses on providing accurate evidence of practice and supports improvement is central for teachers' development. Having clear standards that teachers are expected to meet is an important starting point considered in this chapter. We review evaluation processes, emphasising the importance of teachers' reflective participation. We also consider classroom observation practices and giving feedback to teachers who support professional growth and development.

6.1 What is teacher evaluation and why is it important?

Teacher evaluation is a vital element in improving student learning outcomes. It is concerned with gathering evidence from a range of sources that inform on teacher performance and using this to support improvements in practice. This is sometimes referred to as performance review, teacher appraisal or teacher assessment. A good teacher evaluation system is a powerful tool to:

- help schools improve
- identify opportunities for teachers of all levels to develop further
- deliver accountability for learner progress.

In the first round of the OECD Teaching and Learning International Survey (OECD 2009, p. 29), teachers reported that "performance review and feedback increases their job satisfaction and significantly increases their development as teachers".

There are a number of approaches that can be used in evaluating teaching. The most common include:

- classroom observations (by managers, other teachers or external evaluators)
- value-added models that try to measure gains in student achievement
- student evaluations of teachers
- judgements made by the teacher's line manager or principal
- teacher self-evaluation
- teacher portfolios of work.

How judgements are made is critically important. Too much weight can be given to a narrow range of evidence, for example students' examination performance. Triangulating evidence from a number of sources, systematically incorporating classroom observations and using more than one evaluator will help ensure judgements are sound.

Teacher evaluation systems are influenced by many factors. The following are important for their success:

- The system identifies and supports the values of the school.
- Teachers and managers are fully prepared for the implementation of the review system and they understand it.
- Care is taken that evaluation focuses on teachers' professional practice.
- Teachers are evaluated formatively to provide feedback and identify professional development needs, so their knowledge and experience can grow. In this way, performance review of teachers has a direct benefit on the learning experience of learners, and therefore on learner outcomes.
- The process is manageable and supports teaching rather than becoming a burden that hinders it.

Some systems emphasise evaluation with the intention of holding teachers to account rather than improvement. Some also link performance to salary changes. While there are effective evaluation systems that combine summative performance review with formative evaluation, there is a danger that they can unintentionally create a climate of fear and resistance among

6: Evaluating teaching continued

teachers and inhibit creativity and honesty. Teachers might be less willing to be self-critical if their pay is linked to performance. Systems work much better when they motivate.

6.2 Developing standards for teachers

Standards are clear descriptions used to define and measure quality expectations. We have already considered the importance of developing a clear understanding of learning and assessment objectives when planning lessons, and ensuring learners understand these. For teacher evaluation the practice is similar. Teachers need to have a clear knowledge and understanding of the standards and criteria against which they can evaluate their own performance and against which they will be evaluated by their managers.

Most schools will already have their own standards for teachers that can be refined and developed. Some Cambridge schools will be operating in systems where national standards are already prescribed, and they could expand these. Researching standards that have been developed by excellent schools and school systems is helpful (see for example Danielson 1996). However, it is important for schools to develop their own and not just copy a system designed for another context. Establishing appropriate standards needs to be led by the school's most skilled practitioners, who know the expertise and competencies good teachers must have. Standards need to be informed by the school's vision and mission as well as the expectations Cambridge International defines. We created the Cambridge teacher and learner profiles (see Chapter 4, Table 4) to help schools identify the sorts of attributes teachers need to be effective at delivering Cambridge programmes, and it provides an important reference.

One example of a four-criteria model for developing teacher standards is described next. Please note that this is provided for guidance only.

Table 8: Four-criteria model for developing teacher standards

Stage 1

Agree the criteria. The criteria in this model have been designed as broad headings to describe the key elements in which a good teacher will be engaged.

- Learner development and well-being.
- Learner achievement and progress.
- Teacher professional development and improvement.
- Contribution to whole school and community (in order to promote learning).

6: Evaluating teaching continued

Stage 2

Agree the aspects of the teacher's role that contribute to the criteria. It might be helpful to make a list of these and then to summarise the expectations as in the model below.

Learner development and well-being.

Every teacher in our school will:

- have high expectations of the behaviour, attitudes and potential for progress of all learners
- be confident, responsible, reflective, innovative and engaged
- manage classes and the classroom well
- inspire and motivate all learners
- build, model and nurture strong and positive relationships with all learners
- encourage all learners to reflect on their work and progress
- help all learners to set and achieve challenging and appropriate targets
- identify learners who need additional support and/or challenge and provide this.

The teacher uses resources, routines and procedures to provide a respectful, positive, safe, learner-centred environment that is supportive of all learners and conducive to learning.

Learner achievement and progress.

Every teacher in our school will:

- be accountable for learners' progress and outcomes
- plan and teach well-structured lessons that promote a love of learning
- have a secure knowledge of the curriculum area
- use a range of inspiring teaching resources
- use effective teaching strategies to help all learners to learn, including effective questioning
- assess learners' progress regularly and effectively
- give regular and supportive feedback to all learners.

The teacher plans and supports learning using the school's curriculum, effective strategies, resources and data. They engage learners effectively, measuring their progress and meeting individual learning needs.

Teacher professional development and improvement.

Every teacher in our school will:

- engage in professional development in their curriculum and/or specialist area
- take an interest in current research in the curriculum, effective teaching strategies and how children learn
- contribute to the professional development of other teachers in our school
- collaborate regularly with other teachers to improve our teaching practices
- develop expertise in and use a range of different resources, including ICT
- build, model and nurture strong and positive relationships with all colleagues
- contribute to our overall mission of the school as a learning community.

The teacher is a committed professional who communicates effectively. They take responsibility for and participate in professional growth that results in enhanced student learning.

Contribution to whole school and community (in order to promote learning).

Every teacher in our school will:

- build, model and nurture strong and positive relationships with all parents
- collaborate and communicate sensitively and respectfully with parents and the community
- make sure that parents understand what they can do to support their children's learning
- contribute to the personal development of learners outside the classroom through, for example, running an after-school club.

The teacher collaborates, communicates and works in partnership with learners, families and the school's community to promote student learning and achievement in and beyond the classroom.

6: Evaluating teaching continued

Stage 3

To make sure that teachers can effectively assess their own practice and are confident that, when they are evaluated, that evaluation is fair and unbiased, they need to have examples of what is expected for each criterion. Exemplar behaviours or indicators should, therefore, be developed at this stage to explain what each of the criteria means in terms of teacher behaviour. For example, what does highly effective lesson planning really mean? How can we judge the difference between effective and developing practice in assessing learners' work?

The exemplar indicators in the model are designed to help teachers and evaluators judge whether teaching is highly effective, effective, or developing in response to each of the criteria. When used with supporting evidence, for example from classroom observation, they also provide a rigorous 'checklist' system. This will make sure that your monitoring and evaluation fairly and accurately assesses your teachers. Appraisers can also use these exemplar indicators when assessing how effectively teachers are fulfilling the teacher standards and criteria in their professional practice.

Stage 4

Introduce the standards and criteria to all your teachers. You may decide to consult with the whole teaching staff at this stage. Or, the working group may have consulted with curriculum areas while writing them. Whatever you decide, teachers need to have a good understanding of the standards and criteria you have developed and of their purpose and use. Their introduction will be a good starting point for you to discuss, plan and develop your teacher performance review policy.



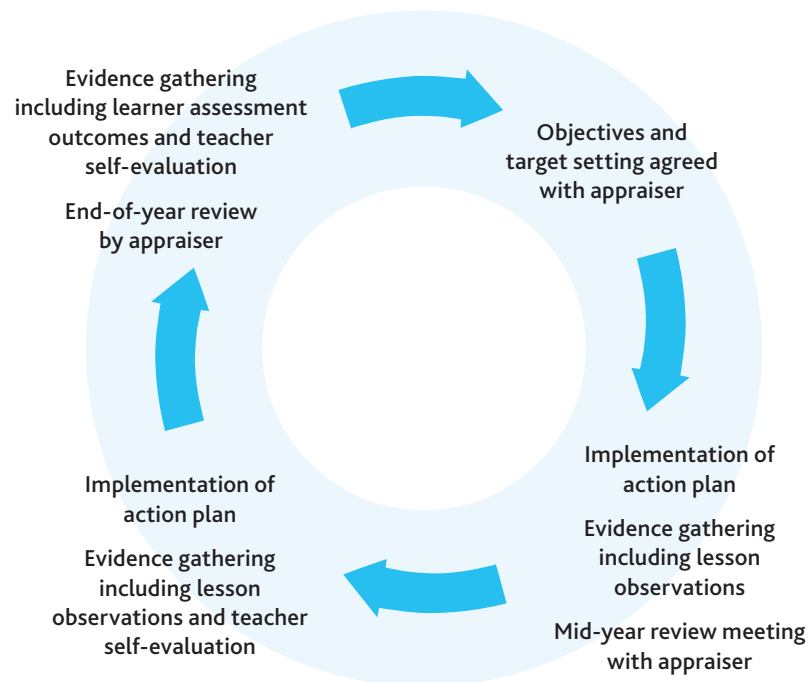
6: Evaluating teaching continued

6.3 The teacher evaluation process

The following diagram illustrates a typical annual review cycle. The process starts with setting objectives. This might be completed immediately after the final review at the end of a school year, or at the start of a new school year. The teacher needs to reflect on their evaluation report. This will identify strengths and areas needing improvement, and a few priority objectives for the year ahead. Objectives should be focused and achievable, and need to be discussed and agreed with managers. You will also need to identify any professional development support that is needed. Remember that having too many objectives makes it difficult to focus on achieving them.

Teachers will incorporate their objectives and apply the teaching standards throughout the year. In an ideal situation managers should be visiting classrooms regularly.

Figure 6: Model of a teacher evaluation cycle



Feedback should be formative, supportive and ongoing. An excellent practice is to encourage teachers to visit each other's classrooms and act as 'critical friends'. Schools should use their best teachers as role models and a resource to support less experienced or underperforming staff. How far a manager observes and oversees a teacher will depend on the situation – teachers who are new to the profession or who are struggling will need more monitoring and support.

Ideally include at least one more formal meeting (normally mid-year) between teachers and their managers to review progress. Classroom observations provide critical evidence, and we consider these in detail in the next section.

One valuable form of feedback that some schools decide to use is student evaluation of teachers' performance. This practice only works well in some cultures and settings, so you must decide if it could work in your school. When done well, it can provide a particularly powerful form of feedback. Good student evaluation of teacher systems includes the following characteristics:

- Students are given very clear and specific guidance about the feedback being requested.
- Students' comments are in relation to the teaching standards and never personal.
- Students do not rate the teacher; they provide feedback.
- Teachers give students a list of questions, based on their own objectives and school standards. Students only respond to these.

Ways of making student evaluation less threatening include encouraging, but not requiring it, and/or requiring all feedback to go to the teachers concerned rather than the teacher's manager. The teacher is then expected to write a summary of the feedback, which is shared with their manager and considered at the final review.

The final review should be a well-structured meeting following a clear agenda. Documentary evidence is presented and discussed. This is likely to include lesson observation reports and the teacher's own self-evaluation. A common format for the report will help structure the meeting and ensure consistency. The meeting should be highly reflective, with teachers encouraged to talk about what they have learned and what they found challenging.

6: Evaluating teaching continued

Procedures and practices also need to be defined to deal with any specific concerns about a teacher, for example by parents or students. This needs to be treated separately from teacher evaluation. Concerns that are repeated and substantiated will provide one source of evidence in evaluating performance. If concerns are proved justified, first create a course of action to help the teacher correct the performance issue(s). Keep a written record of the issues, agreed actions and support, as well as timeframes. The school needs to have a clear policy that identifies principles, practices and procedures that will be followed, ensuring fairness and transparency.

Managing the evaluation process

- Make sure that each teacher has an up-to-date job description.
- Allocate an appraiser to each teacher – usually the teacher's line manager.
- Identify a reasonable number of teachers that an individual appraiser is responsible for (a maximum of five teachers is recommended).
- Provide professional development and support to make sure that each individual appraiser:
 - has the specific knowledge, skills, understanding and time to carry out the role effectively
 - understands the school's policies and procedures and how performance review fits into the wider context of a teacher's professional development
 - has copies of all relevant documentation and any whole-school and team objectives as specified in the school development plan
 - understands the impact and implications of equal opportunities on the performance review process
 - is confident in evaluating evidence, including through classroom observation
 - is able to provide constructive feedback and engage in positive dialogue with the teacher
 - is aware of the resources available to support teacher development
 - is not over-burdened with performance review responsibilities.
- Make sure that there are opportunities for appraisers to share knowledge, learn from each other and align practice.

- Consider any justified request made by a teacher for a change in appraiser and make the final decision whether or not to agree a change.
- Make sure that all teachers understand the whole-school objective(s) they need to contribute to.
- Make sure that professional development not only addresses the needs of teachers identified through performance review but that it is also aligned to the whole-school improvement plan.

6.4 Classroom observation

Classroom observations are the most widely used source of evidence to give feedback to teachers. Observing lessons provides a unique opportunity to understand the curriculum students actually experience and what learners undergo on a daily basis. Unfortunately in many instances this is poorly done, with a very limited impact on student outcomes (Coe et al 2014). Schools need to ensure that the process is robust, understood and delivered in an environment of trust and understanding.

Observations can:

- give first-hand evidence to help evaluate an individual teacher's practice and the progress they are making in relation to the objectives agreed during teacher performance reviews
- monitor whether the school's teaching standards are being applied consistently throughout the school
- give a deeper view of the school's performance by triangulating classroom observation findings with other data (for example scrutinising learners' work, analysing end-of-unit assessments and students' performance in Cambridge qualifications)
- show how well new courses or schemes of work are being introduced
- provide first-hand knowledge of what learners experience in a particular year group or grade (learner shadowing, where an evaluator follows one student for a day or more, attending all their classes)
- establish where in the school good practice exists and identify expertise so that it can be used as part of the school's professional development programme

6: Evaluating teaching continued

- offer opportunities for mentoring and coaching
- offer opportunities for teachers to work collaboratively by becoming 'critical friends' of each other's practice.

Observing a lesson is a privilege and a responsibility. Positive relationships between teachers and learners and between learners themselves are built and developed over time, and are crucial for a strong learning ethos in the classroom. Having an observer in the classroom can place pressure on teachers, even when the observer is present as a 'critical friend' or to observe learners rather than aspects of the teacher's practice. This can affect the behaviour of teachers and learners.

Where classroom observations are primarily used for teacher evaluation in a school, teachers tend to be more nervous about the process. It can be very helpful to encourage using observation developmentally by involving all teachers in observing lessons of their peers. This could be through developing a coaching model or in a less formal way, for example teachers observing other teachers in their subject area. Peer observations can play a key role in gaining teachers' confidence in the benefits of classroom observation for sharing and developing practice.

Having clear protocols or guidelines for classroom observation practice can also help to make sure that the experience is as positive and developmental as possible – for the teacher, the observer and learners. Involve teachers in agreeing these protocols so that they understand the purposes of classroom observation and feel a greater ownership of the process. They will also recognise that it can be a key support for their professional learning. The following are examples of questions you might wish to ask:

- Should teachers always be warned about an observation, even when it is not part of their evaluation? What notice should a teacher be given of a formal observation?
- Should there be a limit on the number of times a teacher's class is observed?
- Can teachers arrange to observe each other informally in addition to any whole-school or subject-wide observation schedule?
- Should classroom observation guidance apply to impromptu 'drop-in' observations?
- Should there be guidelines for observers? For example, you may wish to state that, unless agreed in advance, the observer should not interrupt or join in with the lesson, but may take opportunities to talk to learners when appropriate.

- Should there be guidelines for teachers? For example, should teachers greet the observer? Should they make sure a lesson plan is placed where they wish the observer to sit?
- What preparation or training should the school provide for teachers in classroom observation practice and giving feedback?

Developing classroom observation strategies

For formal observations that form part of the evaluation process you will need a common approach to ensure fairness and consistency. Table 9 provides some guidance on effective observation practices. Table 10 provides one very simple example of a teacher evaluation form.

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Table 9: Suggested strategies for observing lessons

Observing lessons	
<p>Think how you would like an observer to behave in your classroom and model this.</p> <p>Remember that you are a colleague, not an inspector. Whatever the focus of the observation, the purpose should be about improving learning and so be developmental. Try to put your colleagues at ease and be as unobtrusive in the classroom as possible. If you stand with a clipboard and pen it looks more like you are there to judge performance rather than observe to support development.</p>	<p>Take opportunities to talk to learners.</p> <p>There should always be opportunities to talk and listen to learners without disturbing their learning or interrupting the teacher in a lesson. Of course, this should be done quietly and discretely. However, if there are no opportunities because it would interrupt the teacher, then the teacher is probably directing and instructing too much. If you are worried that it would disturb the learners, think about moving to sit and listen to different groups while they are working. Ask questions that are relevant to their learning. For example, ask them to describe what they are doing and how they will know that they have achieved the learning or lesson objective well. Ask if you may look at their workbooks while they are working on something else.</p>
<p>Arrive at the lesson promptly.</p> <p>Unless you are only observing the final part of the lesson, or are conducting a learning walk, it is courteous to arrive at the lesson on time. Take the seat provided for you and see how the lesson starts.</p>	<p>Learners can provide us with lots of primary evidence including:</p> <ul style="list-style-type: none">• what it is like to attend lessons with this teacher in this subject, so how typical the lesson you are observing is• how enthusiastic they are about their learning and the course• how much progress they think they are making and how they know this• how effectively the teacher delivers the course and helps them to understand what they need to do to improve further• any problems they are facing and what support they receive from the teacher.
<p>Remember you are there to observe.</p> <p>Observing means watching attentively. If you are writing all the time you are in the lesson, you cannot observe properly. A good method to practise is to avoid writing anything for at least 10 minutes. Then, when you do write, make concise notes using bullet points. This will help you remember particular strengths and areas for improvement to discuss with the teacher (What went well; even better if...). Think of standing back and looking at the 'big picture'. This is often what teachers in the classroom fail to do for themselves, so your post-lesson discussions will be all the richer if you are able to 'replay' this for them.</p>	<p>Before the observation think about what you want to know and what questions you will ask if you have the opportunity.</p> <ul style="list-style-type: none">• Talk to learners about the work they are currently doing and past work in their books.• Plan questions carefully to suit the age group of the learners.• Avoid leading questions.• Keep the questions brief and simple.• Use real examples in questions.• Ask questions that do not go back too far for younger learners to remember.
<p>Focus on the learners.</p> <p>Whatever the focus for the observation, look for the teacher's impact on each learner and their progress. This takes practice, but it is helpful to think in terms of cause (what the teacher does) and effect (what progress towards mastering the learning objective all learners make as a result). If we do this, it helps to make sure that we are objective observers. It also makes it less likely that our observations are influenced by our own style of teaching or over influenced by those teachers who are naturally more charismatic. It also makes sure that we recognise the strengths of a lesson planned so effectively that the teacher appears to be redundant because learners take full charge of their own learning.</p>	<p>Look at work and displays on the walls.</p> <p>Take time to look around you to observe the learning environment. Are there any resources on the walls to support learners? Do they find them useful? Are there any examples of assessed learner work on display? Does it help learners to know what to aim for and how they can get there?</p>

6: Evaluating teaching continued

Table 10: Example of a teacher evaluation form

A		Overall learning environment created by the teacher (Evidence in lesson observation)				Comments
		1	2	3	4	
1.	The teacher creates a safe and pleasant learning environment					
2.	The teacher clearly respects the students and listens to the voice of the learner					
3.	The overall atmosphere in class is positive and encouraging					
4.	The teacher has an open and approachable relationship with students					
B		Instructional practice (Evidence in lesson observation, lesson plans)				Comments
		1	2	3	4	
5.	The teacher leads the class in well-prepared activities					
6.	The objectives of the lesson are clear to the teacher and to the students					
7.	The lesson accurately develops student understanding of part of the Cambridge curriculum					
8.	The teacher has an open and approachable relationship with students					
9.	The teacher checks students' (previous) understanding					
10.	The teacher uses classroom materials and media when appropriate					
11.	The teacher delivers the lesson clearly in an effective style					
C		Differentiation (Evidence in observed lesson, lesson plans, student work, student questionnaire)				Comments
		1	2	3	4	
12.	The teacher pays special attention to the very able students (e.g. by offering in-depth assignments and tasks)					
13.	The teacher pays special attention to the academically weaker students					
14.	The teacher supports bilingual students within his or her subject area					

continued

6: Evaluating teaching continued

D		Preparation (Evidence lesson plans, student work, student questionnaire)				Comments
		1	2	3	4	
15.	The teacher is aware of Cambridge expectations, as published in the guide, and uses the Cambridge syllabuses and support materials in planning lessons					
16.	Lessons are planned that incorporate a variety of appropriate activities consistent with Cambridge expectations					

E		Assessment (Evidence in marked student work, observed lesson, lesson plans, student questionnaire)				Comments
		1	2	3	4	
17.	The teacher provides regular, clear and accurate formative feedback to students on their performance indicating what they need to do to improve. Cambridge assessment criteria are appropriately used					
18.	The teacher provides regular, clear and accurate summative assessment					
19.	Students demonstrate understanding of the nature and expectations of Cambridge assessment in the subject					

F		Beyond the classroom (Evidence: self-evaluation, faculty head comments, student feedback)				Comments
		1	2	3	4	
20.	The teacher is a proactive departmental colleague					
21.	The teacher is actively engaged in professional development to become a better teacher					
22.	The teacher supports students with their learning beyond the classroom by offering extra academic support					

6.5 Giving effective feedback to teachers

In a review of research, What makes great teaching? (Coe et al 2014, p. 39), the authors cite a range of studies that "... suggest the quality of feedback is a key component of any teacher assessment". To make sure that feedback is high quality, observers need guidance, training and practice. They identify six principles for teacher feedback that support sustained professional learning:

1. The focus is kept clearly on improving student outcomes.
2. Feedback is related to clear, specific and challenging goals for the recipient.
3. Attention is on the learning rather than the person or on comparisons with others.
4. Teachers are encouraged to be continual independent learners.

6: Evaluating teaching continued

5. Feedback is mediated by a mentor in an environment of trust and support.
6. An environment of professional learning and support is promoted by the school's leadership.

Just as classroom observation should be supportive and developmental, so feedback to teachers on what has been observed should help them to decide on their next steps for professional learning and development. Ideally give verbal feedback to the teacher

within 48 hours of the observation. If the observation is formal, review the lesson with the teacher and provide a written record, preferably within one week.

The written record should include the date of the observation, the focus of the observation, what was learned from it, the feedback given and any further actions/follow-up agreed. Teachers are learners, so many of the suggestions described in Chapter 5 on giving effective developmental feedback to students are also relevant to teachers.

Table 11: Providing feedback to teachers

<p>Conducting the lesson review</p>	<ul style="list-style-type: none"> • Be prompt. The review will be more worthwhile when it is easy to recall the lesson. • Encourage teachers to talk about what they have learned. They should also talk about what they found challenging in supporting learners to achieve the learning objective through the activities chosen. • Give teachers opportunities to discuss their work, focusing on how they can improve. • Ask teachers questions that encourage them to explain their thinking, e.g. "Can you tell me your thinking behind your choice of activities in the lesson?" • Make sure it becomes commonplace for teachers to reflect on each lesson and what they have learned as well as what students learned. • Help teachers to identify their next steps in learning.
<p>Providing feedback</p>	<ul style="list-style-type: none"> • Be focused. Include two or three areas for improvement, referenced to the lesson observed. • Be intelligible. Feedback should be unambiguous and clear. • Be constructive. Include specific guidance for improvement and point towards the relevant criteria for success. Feedback should be specific to individual teachers (not comparing with other teachers) and identify what worked well in addition to what they need to do to improve and how to do it. • Be supportive. Use a positive tone and make clear the support that is available for the teacher. • Relate to the progress made by learners and what the teacher does to support and promote this. • Provide the teacher with more than he or she could gain from self-evaluation of the lesson e.g. information on learner progress gained from talking to individuals and small groups during the lesson; an objective view of whether all learners were engaged actively throughout the lesson. • Be challenging. Encourage the teacher to think more deeply about what they do well, what areas they could improve upon, and how they might do this. • Provide time and support for teachers to act on the feedback given. • Help to identify the next steps in learning.

7: Planning and managing a whole-school professional development programme

“ We will fail ... to improve schooling for children until we acknowledge the importance of schools not only as places for teachers to work but also as places for teachers to learn ” (Smylie 1995).

Throughout this guide we have emphasised the importance of teacher professional development. This chapter suggests principles schools need to think about as they plan their professional development activities. The focus should be on improving learning outcomes. Therefore, important sources of information about priorities for professional development will come from the key areas covered in previous chapters: the school development plan, improving student learning through assessment practices and evaluating teachers. Schools should pay particular attention to coaching and mentoring teachers. They should also take a systematic approach to evaluating their efforts to support continuous professional learning. Finally, this chapter emphasises the need to establish and foster communities of practice in schools and how Cambridge Professional Development Qualifications can help this to happen.

7.1 Planning and evaluating professional development

We cannot overstate how important teacher professional development is to school improvement. In a review of the impact of different school leadership practices on learner outcomes reported in the introduction (Robinson 2007), leaders promoting and participating in teacher learning and development had the greatest impact on student learning.

Timperley (2008) synthesised the research on teacher professional learning and development that has been shown to have a positive impact on valued student outcomes. Her advice for schools planning for teachers' professional learning includes:

- The focus should be on improving valued learner outcomes. Start with students' learning needs. *“Teachers need to be able to answer the question what knowledge and skills do we as teachers need to help students bridge the gap between current understandings and valued student outcomes?”*
- There need to be repeated and sustained opportunities to embed any new learning in an environment of trust and challenge.

- New learning needs to take account of existing practice and prevailing ideas about teaching and learning.
- Leaders should create an environment that supports professional learning.
- Leaders should promote professional learning.

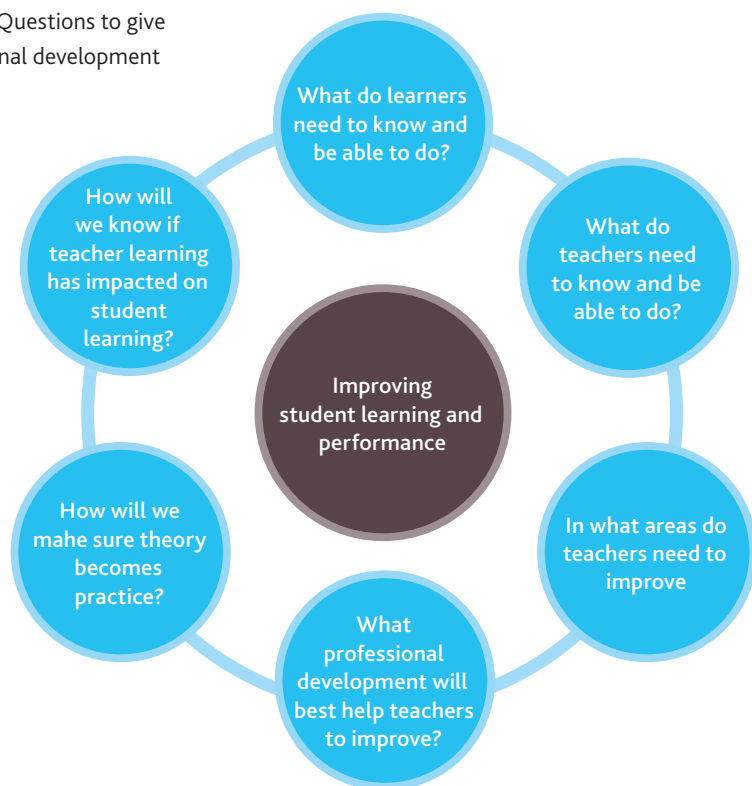
The importance of linking teacher evaluation to professional development was mentioned in Chapter 6. It is very likely that patterns will emerge from teacher evaluations suggesting priorities for professional development. The school development planning process will also identify areas for teacher development which may relate to the whole school or to specific disciplines or year groups. As Figure 7 illustrates, the sequence starts with identifying needs, considering how practice can be improved, applying new practices and then evaluating their impact. Too often important parts of this process are missed out, in particular assessing the impact of changes on student learning, which will then provide input into the next cycle of development.

Teachers and schools are inundated with ideas about how to improve teaching and learning. Some are appropriate, some are not. Too often professional development activities in schools are superficial because too much is attempted – decisions are made

7: Planning and managing a whole-school professional development programme continued

based on the interest an individual has with a new practice rather than on the needs of students. Once you have decided the priorities you must fully engage with them and identify appropriate principles and practices for improving pedagogy. Embedding new practices takes time and effort, and this is another reason why persistent effort and evaluation need to be part of the process. External input, either from outside the school or from experienced colleagues in other parts of the school, can be very helpful. Schools should look internally to their own resources, supporting teachers through coaching and mentoring. The most effective professional development focuses on improving learning rather than changing teaching practice (see Weston 2013).

Figure 7: Questions to give professional development



Professional development refers to a wide range of activities that are intended to improve teacher practice. These include:

- mentoring and coaching
- encouraging teachers to work collaboratively to conduct lesson studies and/or research into the impact of any new teaching strategies they have implemented
- developing team teaching
- developing teaching and learning communities
- encouraging groups of teachers to engage with, and learn from, other successful schools – locally, nationally and internationally
- attending Cambridge training courses
- encouraging teachers to become trainers themselves
- encouraging teachers to become examiners
- encouraging teachers and leaders to take Cambridge Professional Development Qualifications.

Professional development needs will depend on the situation. Teachers new to the profession, or to teaching Cambridge qualifications, will need support from experienced colleagues and to attend appropriate Cambridge training events. Experienced Cambridge teachers will want to improve their practice by leading the development of others (being mentors), involving themselves in professional learning communities, or becoming Cambridge trainers or examiners. They might also want to complete Professional Development Qualifications provided by Cambridge International or others. Some schools do not use their own experienced staff enough to lead the learning for others in the school, relying too much on external training.

Whatever professional learning you engage in to meet your needs, it is important to monitor progress and evaluate to check that it is doing what you need it to do. One framework schools can use to do this (and to answer the question: How will we know if teacher learning has impacted on student learning?) is provided by Guskey (2000). This framework provides five critical stages or levels of evaluation that are arranged hierarchically and move from the simple to more complex. The table below lists these stages. It also shows the key research questions and methodologies schools can use to make the impact of their professional development programmes more visible to their community.

7: Planning and managing a whole-school professional development programme continued

Note that with each succeeding level, the process of gathering evaluation information is likely to require increased time and resources. As Guskey (2000, p. 78) states, “each higher level builds on the ones before [such that] success at one level is necessary for success at the levels that follow”.

Table 12: Adapted from Five Critical Levels of Professional Development Evaluation (Guskey 2000)

Evaluation level	What questions are addressed?	How will information be gathered?	What is measured or assessed?	How will information be used?
1. Participants' reactions	<ul style="list-style-type: none"> • Did they like it? • Was their time well spent? • Did the material make sense? • Will it be useful? • Was the leader knowledgeable and helpful? • Was the environment right and fit for purpose? 	Questionnaires administered at the end of the session.	Initial satisfaction with the experience.	To improve programme design and delivery.
2. Participants' learning	Did participants acquire the intended knowledge, conceptual understandings and skills?	<ul style="list-style-type: none"> • Questionnaires • Simulations • Demonstrations • Participant reflections (oral and/or written) • Professional portfolios of evidence. 	New knowledge, understanding and skills of participants.	To improve programme content, format and organisation.
3. Organisation support and change	<ul style="list-style-type: none"> • Was implementation advocated, facilitated and supported? • Was the support public and overt? • Were problems addressed quickly and efficiently? • Were sufficient resources made available? • Were successes recognised and shared? • What was the impact on the organisation? • Did it affect the organisation's culture and procedures? 	<ul style="list-style-type: none"> • School records • Minutes from follow-up meetings • Questionnaires • Structured interviews with participants and school leadership • Professional portfolios of evidence. 	The organisation's advocacy, support, accommodation, facilitation and recognition.	To document and improve organisation support. To inform future change efforts.

continued

7: Planning and managing a whole-school professional development programme continued

Evaluation level	What questions are addressed?	How will information be gathered?	What is measured or assessed?	How will information be used?
4. Participants' use of new knowledge and skills	<ul style="list-style-type: none"> • Did participants effectively apply the new knowledge and skills? • Did classroom practice change as a result? 	<ul style="list-style-type: none"> • Questionnaires • Structured interviews with participants and their mentors • Participant reflections (oral and/or written) • Professional portfolios of evidence • Direct observations • Video or audio tapes. 	Degree and quality of implementation.	To document and improve the implementation of programme content.
5. Student outcomes	<ul style="list-style-type: none"> • What was the impact on students? • Did it affect student performance or achievement? • Did it influence students' physical or emotional well-being? • Are students more confident as learners? • Is student attendance improving? • Are dropouts decreasing? • Have levels of literacy and numeracy improved? 	<ul style="list-style-type: none"> • Student records (formative and summative) • School records • Questionnaires • Structured interviews with students, parents, teachers, and/or leadership • Professional portfolios of evidence. 	Student learning outcomes: <ul style="list-style-type: none"> • Cognitive (performance and achievement) • Metacognitive or self-regulated learning • Affective (attitudes and dispositions) • Psychomotor (skills and behaviours). 	To focus and improve all aspects of programme design, implementation and follow-up. To demonstrate the overall impact of professional development.

The key purpose of professional development is made clear – to change classroom practice and thereby improve student outcomes. If schools are serious about the investments they make in this area, then a systematic approach to evaluation is key – to both understand the effectiveness of teacher professional development and determine future expenditure. Adopting the framework provided by Guskey will go some way in helping schools with this process.

7.2 Mentoring and coaching teachers

Introducing and implementing a high-quality programme of mentoring and coaching is one effective way of promoting good practice within the school to improve teachers'

skills and performance. The terms 'mentoring' and 'coaching' are sometimes used as if they are the same. While they do have many aspects in common, each has specific attributes and specific uses. Schools need to consider the potential impact of each and carefully plan how to introduce and implement them.

A national framework for coaching and mentoring in England developed by the Centre for the Use of Research and Evidence in Education (CUREE) in 2005 distinguished between mentoring, specialist coaching and co-coaching (peer coaching):

- **Mentoring** is a structured, sustained process for supporting professional learners through significant career transitions.

7: Planning and managing a whole-school professional development programme continued

- **Specialist coaching** is a structured, sustained process for developing a specific aspect of a professional learner's practice.
- **Collaborative (co-) coaching** is a structured, sustained process between two or more professional learners to help them embed new knowledge and skills from specialist sources in day-to-day practice.

Mentoring

Mentoring is a supportive, long-term relationship between an experienced teacher (mentor) and a less experienced teacher (mentee). A mentoring programme is often used as part of the induction process. It supports teachers who are newly qualified and/or new to the school, or those newly appointed to management or other 'new' positions. The relationship is characterised by the fact that the mentor has greater experience and more advanced skills than the mentee. The mentor seeks to alter and improve the teacher's behaviour, values and pedagogy. The process may form part of the teacher performance review process.

The role of the mentor:

- Provide support for the teacher, professionally and emotionally.
- Demonstrate effective teaching skills and strategies.
- Lead learning conversations that support, scaffold and challenge the teacher to improve their pedagogy.
- Support and guide the teacher's lesson planning, observe and assess the lesson, provide feedback against agreed criteria.
- Set targets for improvement with the teacher.
- Advise and help to negotiate the teacher's next steps for professional development.

Professional mentoring is a highly skilled role for which mentors need to be well prepared. In most cases, they will need professional development themselves to learn and develop the necessary skills. Mentoring itself will also provide opportunities for development, especially as the mentor will learn from the relationship with the mentee.

A professional mentor needs to have the following skills and attributes:

- A reflective practitioner with a clear understanding of what constitutes outstanding teaching and learning.

- Respected as an effective practitioner by other teachers and learners.
- A skilled, active listener and someone who asks the mentee open, rather than closed, questions.
- Effective at modelling and describing potential teaching strategies.
- Open to sharing and discussing pedagogy.
- Skilled and experienced at classroom observation and providing sensitive and developmental feedback.
- Prepared to commit time and resources to the mentoring relationship.

Coaching

According to Creasy and Paterson (2005, p. 10) *"Whilst it takes many different forms, coaching is principally a joint enterprise in which one person supports another to develop their understanding and practice in an area defined by their own needs and interests. ... Coaching often involves integrating new or alternative approaches into the professional's existing repertoire of skills and strategies."*

The coaching relationship is characterised by the fact that it is non-hierarchical and involves peer-to-peer discussion and collaborative working. Teachers choose their coaches and what area of their practice they want to work on. Coaching is a partnership, with the coach playing the role of 'critical friend'. They give objective feedback on the teacher's strengths and areas for development so they can evaluate their own performance. The coach may lead the discussions at times, but the teacher should be in control. In discussion with the coach, the teacher analyses and evaluates their practice, sets targets, identifies next steps for development, and decides what support or training they might need and where to find it.

The role of the coach involves:

- building a supportive, collaborative working relationship. This may include joint lesson planning, delivery and evaluation
- facilitating discussions and encouraging the teacher to take the lead
- not being judgemental
- normally being an equal, rather than a superior, to the teacher in the school's hierarchical structure

7: Planning and managing a whole-school professional development programme continued

- focusing on the areas agreed with the teacher. For example, if the teacher has planned to use new strategies to differentiate by content, the coach may agree to gather data on individual learners. This will assess how well they are making sense of the content and reacting to the task. After the lesson, the coach and the teacher consider the lesson using the information gathered and evaluate the impact of the new strategies. (You could set up a video camera to record the lesson for deconstructing. This has the advantage of allowing the teacher and coach to observe the lesson together. Also, if the camera is set up on a tripod the coach does not necessarily need to be present in the lesson)
- giving feedback objectively, focusing on the agreed areas for observation
- supporting teachers to take ownership of their own professional development plan and set their own targets
- being chosen in agreement with the teacher.

Coaches require many of the same qualities and skills as mentors. The coach needs to have good listening skills and ask open and searching questions to help discussion. The relationship needs to be one of mutual respect and, like mentoring, coaching requires training and practice for it to be effective.

7.3 Establishing communities of practice through Cambridge Professional Development Qualifications

Throughout this guide we have emphasised the need to develop the teaching faculty of the school. This investment needs to be sustained over a long period of time. The main objective should be to improve classroom practice and student outcomes. Many successful schools achieve this by developing professional learning communities, or communities of practice among their teachers. These are gatherings of two or more teachers who share a common goal or interest, and which are characterised in the education context by (adapted from Lee and Spillane 2008):

- open classrooms – teacher classroom practice made available for peer observation and critique
- open dialogue between colleagues, deeply reflecting on their practice
- a focus on student learning

- a high degree of collaboration in terms of, for example, curriculum and assessment planning, moderating and standardising the marking of student work, etc.
- sharing constructive norms and values.

Cambridge International supports schools in developing communities of practice through its suite of Professional Development Qualifications. Otherwise known as PDQs, these qualifications have been designed to be integrated, over a sustained period of time, into a school's professional development planning, activities and culture. They help teachers and leaders to:

- engage critically with relevant concepts, principles, theories and international best practice
- apply new ideas and approaches in reflective practice
- evaluate experiences and outcomes to plan further development
- improve the quality of their teaching and leadership to enhance the quality of their learners' learning.

Professional learning draws on the candidate's own teaching and learning environment, making the qualifications immediately applicable and relevant. Crucially, Cambridge PDQs aim to help schools improve through cost-effective, sustainable programmes. They benefit teachers as well as their learners, and demonstrate to parents, carers and the school community that the school values and nurtures its teaching staff.

The suite of Cambridge qualifications covers four themed areas:

- Teaching and Learning
- Teaching Bilingual Learners
- Teaching with Digital Technologies
- Educational Leadership

All qualifications are available at both Certificate and Diploma level, with the Certificate providing a strong foundation for the Diploma. The Cambridge PDQs are accredited by University College London Institute of Education, offering successful candidates a clear pathway to further professional development. The courses are for international education professionals at all stages of their careers.

7: Planning and managing a whole-school professional development programme continued

Becoming a Cambridge Professional Development Centre

Deciding to offer the qualifications is an important step in the school's development process. In doing so, the school is making a clear statement that continuous professional development is a key part of its overall improvement planning and that it wants to meet the needs of its teachers and learners.

All organisations wishing to offer Cambridge PDQs must be approved by Cambridge International. This process allows us to learn more about the school's values and approach to education, and ensure that it meets the appropriate quality standards. Once approved, the school will join a select network of organisations all working to improve their professional development strategy.

You can find more information in the following publications on our website at:
www.cambridgeinternational.org/pdq:

- *Cambridge Professional Development Qualifications – a guide for Cambridge school leaders*
www.cambridgeinternational.org/images/170403-cambridge-professional-development-qualifications-brochure.pdf
- *Becoming a Cambridge Professional Development Centre – a guide to the approval process*
www.cambridgeinternational.org/images/171348-becoming-a-cambridge-professional-development-centre.pdf

8: Working with us

This chapter highlights the range of support services and resources we offer to schools working with us. This includes our Professional Development Qualifications, which were outlined in the previous chapter. It will give you an overview of the different types of support available and where you can find detailed information.

To help your teaching team understand and effectively deliver our programmes, and to meet their professional development needs, we offer a range of support materials and services. Teachers can access this support if your whole-school curriculum is built on Cambridge courses, or if you combine Cambridge courses with other national or international qualifications.

We can provide three major areas of support:

- curriculum materials and resources to support teachers in delivering subject curricula
- professional development
- local advisory and development services.

School Support Hub

An online resource bank and community forum where teachers can access thousands of Cambridge support resources, exchange lesson ideas and materials, and join subject-specific discussion forums.

Assessment tools

We provide dedicated online support to schools registered to offer Cambridge Primary and Cambridge Lower Secondary. Teachers can download progression tests and use results analysis tools to monitor learners' progress.

For teachers and students of Cambridge Global Perspectives

Cambridge schools offering Cambridge Global Perspectives can use our online learning area. It provides a space for teachers and learners to build online communities where they can share resources and work with other schools. In addition, there are interactive Cambridge IGCSE and Cambridge International AS Level Global Perspectives courses available in the online learning area.

Teaching resources

Syllabus (or curriculum framework)

The most important documents teachers will use. They describe what learners need to know, what they must be able to do, and how they will be assessed. We provide curriculum frameworks for Cambridge Primary and Lower Secondary subjects and syllabuses for Cambridge Upper Secondary and Cambridge Advanced subjects.

Schemes of work

Medium-term plans that give ideas on how teachers might deliver the courses.

Teacher guides

Some subjects have teacher guides which provide extra guidance on planning and teaching.

Textbooks and publisher resources

We publish lists of resources to support teaching, including textbooks and websites. Some of these resources are endorsed by us. This means we have quality checked them and judge them to match the syllabus content well.

8: Working with us continued

Example candidate responses (Standards Booklets)

Real candidate answers are shown alongside examiner comments so teachers can see the level of performance needed to achieve each grade.

Exam preparation materials

Past question papers

We publish past papers for each subject. These are useful for giving learners practice at answering different types of question.

Examiner reports

Our principal examiners write detailed reports describing learners' overall performance on each part of the question. The reports give insight into common misconceptions shown by learners, which teachers can address in lessons.

Grade thresholds

These show the minimum number of marks learners needed to achieve in order to be awarded a particular grade.

Mark schemes

These help teachers understand how marks are awarded for each question and what examiners look for when they mark.

For more information go to www.cambridgeinternational.org/teachers

Local support

We can provide local support and guidance for teachers and school leaders involved in implementing the Cambridge curriculum. By working with you we will be able to respond to your specific needs by providing a more personalised experience. We can also help identify solutions or processes to address any problems or challenges you may experience. If you need longer-term support we can work with you to develop and implement a more formalised programme. This could include expert consultancy around activities introduced in this guide, including whole-school evaluation, school development planning and teacher evaluation.

If you are interested in local support please contact us at info@cambridgeinternational.org with 'Local curriculum support request' in the email subject line.

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Annotated bibliography

This guide has provided an introduction to school development, with the aim of improving the delivery of Cambridge programmes and increasing the quality of student learning. In this section we identify some texts for schools interested in exploring some of these ideas further. We recommend these because they are relevant, research based, accessible and reasonably priced. They are good starting points from which you can follow your particular interests, but represent only a few of the wide range available. We encourage schools to share any literature and resource material they have found useful through the School Support Hub.

Black, P., Harrison, C., Lee, C., Marshall, B. and Wiliam, D. (2003). *Assessment for Learning: Putting it into Practice*. Buckingham: Open University Press.

Based on a two-year research project, this title describes the specific assessment for learning practices that 36 UK teachers found productive. It explores the underlying ideas about learning that these practices illustrate and discusses the problems that teachers encountered when implementing the new practices in their classroom. It offers guidance for school management about promoting and supporting such changes.

Clarke, S. (2014). *Outstanding Formative Assessment: Culture and Practice*. London: Hodder Education.

This book focuses on how teachers can create an environment for pupils to be active learners, constant reviewers and self-assessors. It provides ideas and practical strategies based on classroom examples and whole-school case studies for teachers in primary and secondary schools. It includes stories from outstanding schools in order to explore whole-school development.

Claxton, G. (2002). *Building Learning Power: Helping Young People Become Better Learners*. Bristol: TLO.

Building Learning Power is grounded in international research and practical experience. It addresses the skills and understanding that are needed to enable teachers to help young people become better lifelong learners. It offers practical guidance on how teachers can create a culture in the classroom and in the school more widely that systematically cultivates habits and attitudes to empower young people to face difficulty and uncertainty calmly, confidently and creatively.

Guskey, T.R. (2000). *Evaluating Professional Development*. London: Corwin Press.

This book explores the processes and procedures involved in evaluating professional development. It moves through five levels to examine: participants' reactions to professional development; how much participants learn; the evaluation of organisational support and change; how participants use their new knowledge and skills; and improvement in student learning. It includes sample evaluation forms, checklists, and helpful tips.

Hargreaves, A. and Fullan, M. (2012). *Professional Capital: Transforming Teaching in Every School*. London: Routledge.

This book presents action guidelines for classroom teachers and school leaders to transform the culture of teaching and teacher development.

Hattie, J. (2012). *Visible Learning for Teachers: Maximising Impact on Learning*. London: Routledge.

In Visible Learning (2008) Hattie synthesised the results of more than 15 years' research and over 800 meta-analyses on the influences on student achievement. This title explains how to apply the principles of Visible Learning to any classroom. It offers user-friendly summaries of the most successful interventions and practical step-by-step guidance to the effective implementation of visible learning and visible teaching in the classroom.

Hopkins, D. (2001). *School Improvement for Real*. London: RoutledgeFalmer.

This book sets out a strategy for educational change that focuses on student achievement by modifying classroom practice and adapting the management

Annotated bibliography continued

arrangements within the school to support teaching and learning. It outlines an approach to school improvement that has a medium-term, systemic orientation, providing both principles and suggestions for better practice.

MacBeath, J. and Dempster, N. (Eds.) (2009). *Connecting Leadership and Learning: Principles for Practice*. London: Routledge.

This book explores what it means to lead schools that place learning at the centre. It draws on research from seven different country projects to offer five key principles for practice: a focus of learning; an environment for learning; a learning dialogue; shared leadership; internal and external accountability.

MacBeath, J. and McGlynn, A. (2002). *Self-Evaluation: What's in it for Schools?* London: RoutledgeFalmer.

This title makes school self-evaluation accessible, and through the use of case studies, helps schools and teachers to develop self-confidence in working with evaluation tools. It discusses the concerns and issues of schools today to propose challenging ideas for the future.

MacBeath, J. and Mortimore, P. (Ed.) (2004). *Improving School Effectiveness*. Buckingham: Open University Press.

This book reviews findings from seminal international work to analyse school effectiveness, its measurement, and its impact for teachers, parents and pupils.

Mercer, N. and Hodgkinson, S. (Ed.) (2010). *Exploring Talk in School*. London: Sage. Classroom talk is essential for guiding the development of understanding and for learners to understand their teachers and their peers in constructing knowledge. This book considers the practical steps teachers can take to develop effective classroom interaction, looking at: classroom communication and managing social relations; talk in science classrooms; using critical conversations in studying literature; exploratory talk and thinking skills; talking to learn and learning to talk in the mathematics classroom; the 'emerging pedagogy' of the spoken word.

Muijs, D. and Reynolds, D. (2011). *Effective Teaching: Evidence and Practice*. 3rd ed. London: Sage.

This book provides insights into the latest research on effective teaching and learning relevant for primary and secondary levels. The authors provide a broad and

comprehensive overview of the large body of knowledge on effective teaching. It explores: generic teaching skills; teaching for specific goals; subject-specific strategies and other classroom issues. Practitioners are encouraged to reflect through the points for reflection and further reading.

OECD. (2013). *Teachers for the 21st Century: Using Evaluation to Improve Teaching*. OECD Publishing.

Based on evidence from across the world, this report discusses how teacher quality is defined and what standards are set and by whom. It examines what systems are in place for teacher evaluation, how evaluations are conducted and how teacher evaluation contributes to school improvement and teacher self-efficacy.

Pollard, A. (2014). *Reflective Teaching in Schools*. 4th ed. London: Bloomsbury.

This book offers practical advice and evidence-based guidance on key issues in classroom practice including relationships, behaviour, curriculum planning, learning and teaching strategies, assessment and evaluation. It introduces principles and concepts to support a deeper understanding of teacher expertise. It provides numerous examples of effective reflective teaching from diverse school contexts across the world.

Robinson, V. (2011). *Student-Centred Leadership*. San Francisco: Jossey-Bass.

This book shows leaders how they can make a bigger difference to the quality of teaching and learning in their school and ultimately improve their students' performance. It is based on evidence about the impact of different types of leadership on student outcomes. The book includes examples of five types of leadership practice as well as practical lessons and rich accounts of the knowledge and skills that leaders need to employ them with confidence.

Swaffield, S. (Ed.) (2008). *Unlocking Assessment: Understanding for Reflection and Application*. London: Routledge.

This book explores the values, principles, research and theories that underpin our understanding and practice of assessment. It provides practical suggestions and examples, and addresses key points about the future development of assessment. Complex but crucial ideas and issues are made accessible, so that teachers can be more confident and proactive in shaping assessment in their classrooms, in ways that support learning and avoid unintentional harmful consequences.

Annotated bibliography continued

William, D. (2011). *Embedded Formative Assessment*. Bloomington: Solution Tree Press.

William outlines five key strategies of formative assessment: clarifying, sharing and understanding learning intentions and criteria for success; engineering effective classroom discussions, activities and learning tasks that elicit evidence of learning; providing feedback that moves learners forward; activating learners' instructional resources for one another; activating learners as the owners of their learning. Through a summary of the research evidence he shows the impact of each of these strategies, and offers many practical techniques that teachers can use to incorporate the strategies into their classroom practice.

Glossary

Active learning

Learning which engages students and challenges their thinking, using a variety of activities.

Assessment criteria

Concise, written descriptions of what students are expected to know or be able to do and how this will be measured.

Assessment for learning

Approaches employed during learning activities to help teachers and students evaluate progress, providing guidance for subsequent teaching and learning. See also formative assessment.

Assessment rubrics

Make clear the assessment criteria being used and describe different levels of performance in relation to these criteria.

Benchmark

A measure of performance against an established standard.

Bilingual education

Teaching and learning in two or more languages, developing both subject and language knowledge, and skills. For Cambridge International, bilingual education means that learners study typical school subjects – for example, maths or geography – through an additional language (such as English) and some subjects through their first language, or they may study the same subject through two languages. See also www.cambridgeinternational.org/bilingualeducation

Cambridge community

Schools using Cambridge educational programmes.

Cambridge Handbook

The official document detailing the regulations for running Cambridge examinations and assessments. It details the responsibilities of Centres and forms part of the schools' contract with Cambridge International.

Component

An assessable part of a subject examination, not certificated as a separate entity, e.g. a written paper or a practical.

Coursework

Classroom assignments undertaken by learners as prescribed in the syllabus. Normally assessed by the learner's teacher according to criteria set by Cambridge International. The work is moderated within the school and then by Cambridge International or in some cases assessed directly by Cambridge International.

Criterion referenced

Performance is measured against a fixed set of predetermined criteria, which are concise, written descriptions of what students are expected to know and be able to do. This contrasts with norm referencing, where students' performance is compared with that of other students.

Curriculum

An overall description of the aims, content, organisation, methods and evaluation of the learning programme and the factors influencing the quality of learning. The term is used in different ways. In this guide the term is qualified as follows:

- The *school curriculum* refers to the combination of subjects provided by the school.
- A *subject curriculum* refers to the content, skills, conceptual understandings and activities prescribed for a subject over a particular time period.
- The *written curriculum* is the prescribed course of study identified in documents such as syllabuses and schemes of work.
- The *taught curriculum* is what teachers actually deliver in the classroom.
- The *assessed curriculum* is what is summatively assessed at the end of a particular time period.
- The *experienced curriculum* is what students actually learn from their whole educational experience. This includes both planned and unintended outcomes, as a result of all their activities in the learning environment provided by the school.
- The *co-curriculum* refers to valued educational activities, such as social and emotional development, that support learning beyond the school curriculum. The school encourages and supports this.

Glossary continued

Curriculum framework

The systematic structure of the curriculum as set out in document(s) specifying the way in which learning and assessment is to be organised.

Curriculum mapping

This documents all the interrelationships within the curriculum for a particular group of students, making links between subjects, skills development, conceptual understandings and activities over time.

Development planning

The overarching process of enquiry, evaluation, prioritisation, planning and execution of plans designed to improve the learning and achievement of all students.

Differentiated learning

Adapting teaching to suit the needs of different learners based on their current level of understanding and performance in order to help all students fill their potential. This is achieved by providing appropriate learning activities, support and assessment, so that all students in the group can learn effectively.

Educational aims

Statements of the broad purposes or intentions of the curriculum or learning programme.

Evaluation

In this guide 'evaluation' means judgement with a view to improve. Evaluation can also refer to a judgement that holds an individual or group to account. Evaluation involves a process of enquiry based on evidence leading to judgements.

First language

The main or primary language that the learner or teacher uses. When we refer to 'maintenance of the first language', it usually means the language learned first. When we refer to the 'first language as a medium of instruction' in a bilingual education programme, it usually means an official first language identified by the school, not necessarily an individual's 'mother tongue'.

Formal formative assessment

Formative assessment which is planned in advance. It is used to inform the next stage of teaching, for example a class test at the start of a lesson for the whole class with feedback into the teaching of that class.

Formative assessment

Assessment practices used primarily to support students' learning. This includes providing feedback and questioning during the learning process, allowing teaching and learning activities to be modified to improve learning. Harlen (2012, p. 98) makes a distinction between the following:

- **Informal formative assessment**, which broadly corresponds to assessment for learning. Characterised by immediate feedback as a normal part of classwork and usually not planned in advance.

Higher education

Courses in universities and colleges beyond upper secondary school, e.g. degrees.

Management cycle

An iterative process in which school leaders set goals, implement actions, and monitor and evaluate progress and outcomes in relation to the school's strategic plan.

Metacognitive awareness

The ability of a learner accurately to judge their own learning in specific areas and be able to effectively manage it, becoming a self-regulated learner.

Mission statement

A written declaration defining the school's educational purpose and the school's educational aims and values. This might be included in the statement or listed separately.

Moderation

The process of checking that assessment standards have been applied correctly, consistently and fairly, and making adjustments if necessary to ensure that all assessments are aligned to the standards.

Glossary continued

Norm referenced

A process in assessment that measures how a student performed in relation to other students being assessed or a hypothetical average student, which is determined by comparing scores against the performance results of a statistically selected representative group of those assessed.

Pedagogy

The theory and practice of teaching and learning.

Professional development (PD)

Teachers continuously and systematically reflect on and improve their professional thinking and practice, engaging in appropriate learning opportunities to improve and upgrade their knowledge and skills.

Programme of study

A planned schedule of teaching and learning activities, relating to the curriculum framework and qualification. See also Curriculum.

Qualification

The formal certificated recognition of a student's achievement at the end of a particular course. This is based on successful performance demonstrated through assessed evidence.

Reflective practice

The process through which the teacher or learner continuously learns from the experience of planning, practice, assessment and evaluation. This can improve the quality of teaching and learning over time.

Scaffold learning

The teacher provides appropriate guidance, activities and support to enable students to build on their current level of understanding progressively. They acquire confidence and independence in using new knowledge or skills. This helps students achieve more than they could on their own by operating in the zone of proximal development.

Scheme of work

A set of planned units of learning written by the teacher relating to a topic, subject or stage.

Standards

Standards are clear descriptions used to define quality expectations. The term is used in different contexts in this guide.

- The international qualification standard set by Cambridge International

Cambridge standards relate to the prescribed syllabus and its assessment. Cambridge International sets and maintains standards for our qualifications which are the same for all students in all Cambridge schools. We define:

1. Curriculum standard: This standard relates to the explicit and implicit demand of the content and skills set out in our syllabuses.
2. Assessment standard (also called the attainment standard): This standard relates to the demand of the assessments we set. What students know and can do is measured through assessment processes that are valid, reliable and fair. This means that students' results are seen as accurate measures of their performance in relation to the particular subjects being assessed.
3. Grading standards (also called awarding standards): This standard relates to the achievement we recognise via our grade threshold decisions. Students are awarded a mark/grade accurately reflecting their level of performance.

- School standards

Cambridge International identifies registration standards that have to be met for a school to offer Cambridge programmes. They set out an initial quality benchmark that schools must commit to in order to implement successful Cambridge programmes. Some are absolute standards: the school either meets the standards or does not (for example, secure storage arrangements).

Cambridge International requires evidence of other standards for a school to be registered. For example, assessment outcomes are monitored with clear feedback into teaching and learning strategies, but we do not provide detailed criteria related to these. Schools are responsible for this fundamental aspect of school development. Schools may also be required to adhere to other standards in addition to Cambridge International's, such as those of their national regulatory body, or their chain of schools

Glossary continued

Strategic plan

A document that explains the school's strategic priorities for a specified period of time, normally 5–10 years. It includes setting goals, identifying actions to achieve the goals, and considering how resources will be used to achieve the goals that have been identified.

Student-centred learning

In designing the learning activities, the teacher focuses on the needs, abilities and interests of each individual learner in relation to the learning outcomes.

Summative assessment

An assessment of learning that has taken place at the end of a course or unit of study, which is designed primarily to measure achievement. This could also involve ranking, certifying competence or accountability.

Syllabus

A complete description of the aims, content, assessment arrangements and performance requirements for a qualification. A course leading to an award or certificate is based on a subject syllabus.

Teacher support

The framework of courses, resources and guidance that Cambridge International provides to help teachers develop their understanding and delivery of Cambridge programmes.

Timetable

A schedule listing the times and durations of lessons across a specific period of time, often a week. This is sometimes referred to as the teaching schedule.

