Cambridge International Diploma

Syllabus

Cambridge International Diploma

Teaching with Digital Technologies 5886

For examination in 2025 to 2030





Why choose Cambridge?

Cambridge Professional Development Qualifications (PDQs) provide a strong framework to support the effective continuing professional development of candidates (teachers).

They help candidates to:

- engage critically with relevant concepts, principles, theories and best practices from around the world
- apply new ideas and approaches in reflective practice in their own teaching and learning context
- formatively evaluate experiences to plan further development
- transform the quality of teaching and school leadership to improve the outcomes of learners.

Cambridge PDQs are designed to be integrated into schools' professional development planning, activities and culture. They help schools to improve through cost-effective, sustainable programmes that benefit teachers and their learners. They demonstrate to parents, the school community and stakeholders that the school values and nurtures staff development.

The Cambridge International Diploma in Teaching with Digital Technologies is for teachers who want to:

- critically engage with the principles and concepts of using digital technologies to improve their effectiveness as teachers and their learners' learning
- gain further knowledge, skills and understanding of how digital technologies can support inclusive approaches to teaching and learning
- use opportunities to adopt different digital technologies to improve own practice and learners' learning
- collaborate with colleagues to improve professional knowledge and practice
- develop their reflective practice skills to evaluate and improve their classroom practice
- improve their classroom practice using the process of practitioner inquiry
- progress their teaching career.

Research indicates that effective teacher professional development:

- is integrated into the everyday life of the school and the teacher
- considers teachers' prior knowledge and experience
- offers opportunities for reflection and learning from experience
- encourages and supports innovation and collaboration
- helps teachers to develop their existing knowledge, skills and understanding of teaching and learning
- enriches teachers' learning through critical engagement with the theories of others
- is sustained over time and supported by people with expertise.

The Diploma is designed to provide for such professional development.

School feedback: 'Innovation, enlightenment and reinvention of perspective is key in the PDQ journey of the candidates, programme leaders and learners. Embracing and challenging one's self by incorporating digital technologies in the learning and teaching environment creates opportunities and possibilities for school leaders which may not have existed earlier. Hence, it enables them to make provisions and policies to equip learners for the future.'

Feedback from: Jennifer Johnson, Head of Digital Learning – Innovation & Resources, Karachi Grammar School (Middle Section), Karachi, Pakistan

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1 Introduction

Purpose of this document

This syllabus sets out the details of the Diploma in Teaching with Digital Technologies. This is a Cambridge Professional Development Qualification (PDQ) offered by Cambridge International Education.

The syllabus focuses on the learning outcomes and related scheme of assessment. For further guidance on the design principles and features of programmes leading to these qualifications please see the resources for Cambridge Professional Development Centres.

These are available at www.cambridgeinternational.org/pdq

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Quality

Cambridge PDQs are benchmarked to the Framework for Higher Educational Qualifications (FHEQ) for England, Wales and Northern Ireland. Cambridge PDQ Certificates are benchmarked to FHEQ Level 4 and Diplomas to FHEQ Level 5.

This means that teachers and leaders achieving a Cambridge PDQ are well prepared for their next step in the professional development pathway and their Cambridge PDQ has value as they progress to relevant Level 6 and 7 programmes.

School feedback: 'The PDQ lays the framework of whole school collaboration and coherently brings learners, candidates, professional development community and school leaders together by consciously encouraging them to reflect, collaborate, think critically and work towards development of self while establishing a bird's eye view of their role in the process.'

Feedback from: Jennifer Johnson, Head of Digital Learning - Innovation & Resources, Karachi Grammar School (Middle Section), Karachi, Pakistan

2 The Cambridge teacher

Cambridge International programmes and qualifications develop not only subject knowledge and skills but also attitudes, ways of thinking and behaviours.

There are five Cambridge teacher attributes. Cambridge teachers are:

- confident in teaching their subject and engaging each learner in learning
- responsible for themselves, responsive to and respectful of others
- reflective as learners themselves, developing their practice
- innovative and equipped for new and future challenges
- **engaged** intellectually, professionally and socially, ready to make a difference.

More information about teaching Cambridge at your school can be found at:

www.cambridgeinternational.org/support-and-training-for-schools/leading-learning-and-teaching-with-cambridge

Research indicates that effective teaching is the most significant positive factor contributing to learners' development. The quality of a school or school system depends on the quality of its teachers and their teaching.

The characteristics of effective teachers include:

- knowing their curriculum area well
- understanding their learners and meeting their needs as individuals
- encouraging learners to engage actively in their own learning
- ensuring formative assessment is embedded in classroom practice
- making connections, for example, to learners' experiences, the real world, and wider contexts
- using a variety of teaching strategies and activities appropriately
- being reflective and creative practitioners engaged in continuous professional learning
- being collaborative and supporting colleagues, school and community.

Cambridge School Leader and Teacher Standards

Our Cambridge Teacher and School Leader Standards define what we believe to be key characteristics of effective teaching and leadership. They focus on supporting teachers and leaders, and they offer an opportunity for self evaluation which helps them to understand their professional learning and development needs.

The Standards are based on the latest international research into effective teaching and school leadership, taking into account a wide range of international practices and advice from education experts around the world.

Cambridge Teacher Standards

The Cambridge Teacher Standards can be used to:

- evaluate current teaching practice
- help identify, prioritise and plan areas for professional development
- understand the teaching requirements for Cambridge programmes in order to achieve the desired student outcomes.

How to use the Standards

The Standards can be used to evaluate teaching or school leadership by asking key questions and looking for examples from practice. By using our RAG grids teachers can identify where they are now and which areas they need to improve. This would be a really useful exercise to undertake while planning a PDQ programme. It could also be used again to evaluate the programme's impact.

You can download the Standards, RAG grids and online guide from:

www.cambridgeinternational.org/support-and-training-for-schools/professional-development/professional-development-qualifications/school-leader-teacher-standards

3 Syllabus overview

The PDQ Programme Leader

Every Cambridge PDQ Centre appoints a Programme Leader who is responsible for designing and managing the programme. The Programme Leader is pivotal to the quality and success of the Cambridge PDQ programme. The role is wide-ranging, from designing and developing the programme to liaising with mentors, school leadership and Cambridge International. Being an effective Programme Leader is about shaping and supporting professional learning to have an impact on the quality of teaching and leadership in schools.

Programme Leaders evaluate their professional development learning programme as part of their commitment to professional development. Due to the level of support they are required to give candidates during the programme, Programme Leaders are not permitted to compile their own portfolio of evidence and submit it to Cambridge International as part of their own PDQ Programme.

The Diploma syllabus

The Diploma is designed to help teachers use digital technologies effectively and appropriately in supporting their learners' learning. The qualifications encourage candidates to reflect critically on their own and colleagues' teaching, and to experiment with new techniques and technologies. Ultimately, they will improve their own practice, so that all their learners learn more effectively. The qualification is for practising teachers, focusing on the development of knowledge, skills and understanding in the key aspects of teaching with digital technologies. The PDQs are inclusive and relevant to all teaching and learning contexts: from primary and secondary general education, to vocational education and training, and to further, adult and higher education. They help candidates to explore and apply new ideas in their own context, integrate new approaches in their own practice, and demonstrate their professional development as reflective practitioners.

Two essential principles underpin the design of the qualifications: effective teaching and effective professional development.

The programme involves a spiral of professional learning, each stage being a cycle of experiential learning and reflective practice following on from the previous cycle and leading on to the next. Areas of learning are revisited systematically within the programme so that the candidate can engage with these in more depth and detail, and acquire related knowledge and skills.

The spiral of professional learning in a Cambridge PDQ programme depends particularly on three processes:

- observation
- reflection
- learning with and from mentors.

These processes work together. It is crucial that candidates receive feedback from being observed to inform their continuous reflection on their learning experiences. Observation and reflection are much more effective with the support of a mentor.

The mentor develops a learning relationship with the candidate, supporting them during their work-based learning to make the most of the learning experience and to achieve the Cambridge qualification. The mentor understands the essential principles of the Cambridge PDQ, and provides helpful advice to their candidate, sharing their own experiences and knowledge.

Eligibility

Candidates must:

- be a full or part-time teacher employed in an educational institution such as a school, college, university, or adult training centre
- teach in their current institution over a full academic year, for a minimum of 24 weeks and a minimum of six hours per week
- teach a group with a minimum of six learners
- have achieved **one** of the following:

The Cambridge International Certificate in Teaching with Digital Technologies (CICTDT 4167 or 5885)

Or

The Cambridge
International Award in
Teaching and Learning
(CIATL 4163 or 5880) and
1 years teaching experience
relevant to Digital
Technologies

Or

The Cambridge International Certificate in Teaching and Learning (CICTL 4164 or 5881) and 1 years teaching experience relevant to Digital Technologies Two years teaching experience,

and

Or

one of these qualifications or equivalent, including those relevant to Teaching with Digital Technologies:

B.Ed, Qualified Teacher Status (QTS) in the country where qualified, Post Graduate Certificate in Education (PGCE), Qualified Teacher Learning and Skills (QTLS), Diploma in Education and Training (DET)

Five years teaching experience relevant to Teaching with Digital Technologies,

and

Or

successful completion of any additional entry assessments as required by the Cambridge PDQ centre.

- have the regular support of a mentor who understands the essential principles that underpin this qualification, and can provide helpful advice and observations
- be responsible for planning, teaching and formatively assessing groups of learners.

Candidates who do not meet the above criteria cannot make an entry for this syllabus. Those candidates may meet the criteria for syllabus 5880, 5881 or 5883.

School feedback: 'Having the continued support and guidance of mentors throughout the PDQ course have been invaluable for both our candidates and the mentors themselves. We have seen an improvement in reflective practice and an increase in willingness to experiment with best practices. The candidates find they have a safe space to collaborate, share their experiences and ask for advice. This has empowered and made them more open to developing their practice.'

Feedback from: Melissa Alberts, Professional Development Officer, GenEx Institute, Cape Town, South Africa

Language requirements

To take part in the Certificate programme candidates are required to have sufficient competence in English. All candidates should have English language competence comparable to **Level B2** in the **Common European Framework of Reference for Languages (CEFR)**. This framework is provided by the Council for Europe. Further details can be found on the Council's website at http://coe.int/t/dg4/education/elp-reg/cefr grids **EN.**asp

We recommend a minimum requirement of 5.5 on the International English Language Testing System. See **www.ielts.org/** for more details.

What is the qualification structure?

Module 1 can be taken on its own as the Certificate. Candidates can then progress to Modules 2 and 3 to complete the Diploma.

The Diploma can also be taken as a standalone qualification.

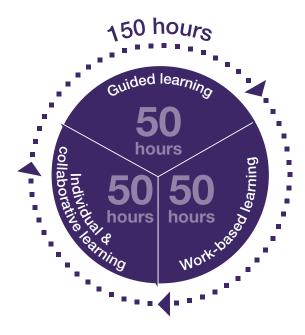


The table below shows what is involved in each module.

Learning hours in preparation	150
Recommended programme duration	4 months per module
Assessment	Portfolio of evidence of practice, learning and reflection

What does the Diploma involve?

A typical Diploma programme run by a Cambridge Professional Development Centre consists of a broad balance of activities, appropriate to the needs and circumstances of teachers and their schools. The programme is planned by the centre's programme leader and team as a coherent sequence of learning over time, with a variety of elements.



Centres must provide at least 50 hours of guided learning for each module. Candidates should integrate as much preparation time as possible into their day-to-day practice. They should allow time for background reading and discussion with their colleagues, to enrich their reflective practice.

During each stage of the programme, candidates explore a number of key questions and engage in a series of activities closely related to their everyday professional work. These activities and related reflections produce evidence for assessment.

The mentor plays a vital role in supporting a candidate. Through discussion and questioning, mentors encourage candidates to reflect on their learning and on what it means for their approaches to teaching. They also help candidates to demonstrate through examples and accounts of practice that they are:

- acquiring new skills
- learning how to use their new skills and knowledge
- linking changes in classroom practice to improvements in learner outcomes.

How is the Diploma assessed?

Candidates are assessed through a Portfolio of evidence, submitted to a team of Cambridge International examiners. In their portfolio, candidates demonstrate their knowledge, skills and understanding in the context of their own work.

School feedback: 'It is so easy to become stagnant when it comes to teaching, but with the PDQ having a large focus on active learning approaches and how to incorporate it into our classroom practices, our candidates were inspired and equipped to incorporate active learning methods within their classroom more effectively. Students are more motivated and engaged in their lessons and play a more conscious and active role in their own learning.'

Feedback from: Melissa Alberts, Professional Development Officer, GenEx Institute, Cape Town, South Africa

Evidence requirements

In their portfolio, candidates will use the relevant Cambridge International templates (*Forms*) to gather, organise and present their evidence to satisfy the assessment criteria.

In the introduction to the portfolio, candidates provide background information about their professional experience and role, and the context in which they teach. This is their opportunity to indicate significant influences on their work and professional development. Although the introduction is not formally assessed or judged, it does help the examiner to understand the teaching context and interpret the subsequent assessment evidence. Please note, however, that a curriculum vitae is not required.

With written evidence, candidates should keep to the word limits and respond to the prompts in templates succinctly. The prompts indicate how to focus and shape explanations, reflections and other evidence. Candidates must also follow Cambridge International's rules for the format and size of digital evidence, such as images and video.

Candidates' reflections should provide references for other people's ideas and experiences, whether these are in the form of academic publications, or posts to online discussion forums or blogs. All sources must be clearly referenced.

The Programme Leader can provide further guidance on academic honesty.

Reflective journal

Candidates will maintain a reflective journal throughout their programme of learning. By keeping a journal, candidates will more effectively evaluate their practice and develop reflective skills which will underpin their professional development.

For further support on reflective practice see:

www.cambridgeinternational.org/teaching-and-learning/getting-started-with/

School feedback: 'PDQ has provided the framework to articulate, formalise and enhance the things I was doing naturally as a teacher, it has encouraged me to be a reflective practitioner and to back my intuition.'

Feedback from: Mrs Wendy H McCabe, Head of Art and Design, Head of Drama, Hebron School, Tamil Nadu, South India, PDQ Diploma in T & L (Distinction)

School feedback: 'Reflection has become my second nature as a teacher. I am able to design this year's lessons with more insight and foresight and what I am witnessing is happy and more confident students. Thanks to PDQ! '

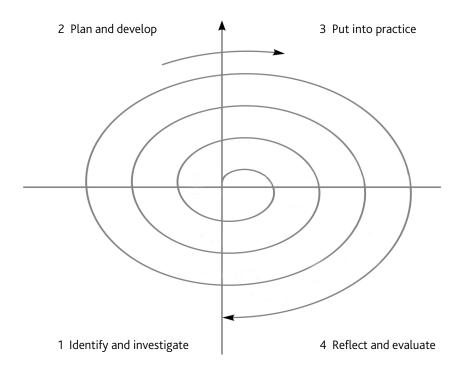
Feedback from: Jyothsna D'Silva, Geography teacher, Hebron School, Tamil Nadu, South India

4 Diploma in Teaching with Digital Technologies

Introduction to the Diploma

Aims

The Cambridge International Diploma in Teaching with Digital Technologies is built on a spiral of learning and development. By reflecting on and evaluating the experiences in each module, further areas for development are identified, and the cycle begins again, this time incorporating new understanding and capabilities. Conscious engagement with this spiral of development results in higher-quality teaching.



In the Diploma, candidates will have the opportunity to:

- understand principles, concepts and issues concerning using digital technologies to support learning, and relate these critically to their own practice
- critically engage with educational theory and research evidence to inform and develop their professional thinking concerning digital technologies in education
- improve their ability to reflect on and evaluate the effectiveness of digital technologies in supporting learning, and to adapt their planning and teaching as appropriate
- develop their confidence to experiment and innovate with a growing range of opportunities offered by digital technologies
- develop their ability to reflect on their own experiences, and those of others, of using digital technologies, so that they can critically assess using such technologies in teaching and learning
- develop their confidence in sharing their practice with fellow teachers, and their ability to select, adapt and use ideas from the wider educational community, including their own learners.

Candidates can work towards the Diploma at their own pace, depending on their priorities and circumstances. Certification provides an international quality mark, enhancing their professional profile, and opening pathways for their further professional and career development.

Structure

Module 2	Developing reflective practice in teaching with digital technologies
Module 3	Developing professional practice

Each module is set out in terms of its learning outcomes, key questions, assessment approach and evidence requirements. Assessment criteria appear at the end of this section.

- Each **learning outcome** is a statement that defines the expected goal of a curriculum, in terms of demonstrable skills or knowledge that will be acquired by the candidate.
- The **key questions** show professional learning related to each learning outcome. These questions will support the candidate as they explore the knowledge required to meet the learning outcome.
- The **assessment approach and evidence requirements** explain how candidates can show that they have achieved the learning outcomes.
- The **assessment criteria** are used by Cambridge International examiners in their judgements on the quality of the evidence presented. They specify what the candidate is expected to do in order to demonstrate that they have achieved a learning outcome.

Module 2 Developing reflective practice in teaching with digital technologies

In this module candidates will develop their classroom practice, informed by relevant theories, concepts and principles of teaching with digital technologies, so that they can achieve the following learning outcomes.

Learning outcomes

- **M:** Plan a coherent scheme of learning that includes digital technologies to support teaching and promote learning.
- **N:** Plan lessons that are coherent, supported by appropriate digital technologies and have clear links to prior learning.
- **O:** Teach lessons that are inclusive, using digital technologies that are effectively managed and develop learners' learning.
- **P:** Teach lessons in which the learning is often differentiated using a variety of strategies and digital technologies that support active learning.
- Q: Teach lessons using Assessment for Learning (AfL) strategies to help learners learn more effectively.
- **R:** Evaluate lessons to determine the effectiveness that using digital technologies has on learners' learning, and their own practice, using feedback from their mentor and own reflection.

Learning outcomes and key questions

Learning outcome M: Plan a coherent scheme of learning that includes digital technologies to support teaching and promote learning.

- What do you need to consider when designing a scheme of learning that includes digital technologies?
- Which skills does your scheme of learning develop?
- How did you select the specific digital technologies that are included in your scheme of learning?
- Is there a good balance of digital technologies to support teaching and to promote learning within your scheme of learning?
- Which concepts, principles and theories did you refer to when designing your scheme of learning?

Learning outcome N: Plan lessons that are coherent, supported by appropriate digital technologies and have clear links to prior learning.

- How do you choose appropriate digital technologies to support teaching and promote learning?
- What are the features of a coherent lesson?
- What strategies can you use to determine learners' prior learning?
- How can you assess whether learning has happened from one lesson to the next?

Learning outcome O: Teach lessons that are inclusive, using digital technologies that are effectively managed and develop learners' learning.

- Why might digital technologies help promote an inclusive learning environment?
- What do we mean by suitable classroom management strategies?
- What classroom management strategies are needed when using digital technologies to promote learning?
- How can digital technologies both challenge and support learners?
- How do you ensure that all learners are engaged and supported in a lesson?

Learning outcome P: Teach lessons in which the learning is often differentiated using a variety of strategies and digital technologies that support active learning.

- What do we mean by 'differentiated learning' and 'active learning'?
- Why is it important that you differentiate learning?
- What strategies can you use to differentiate learning when using digital technologies?
- How can you ensure that all learners are appropriately challenged and engaged?
- How can you assess progress towards the learning objectives when differentiating learning?

Learning outcome Q: Teach lessons using Assessment for Learning (AfL) strategies to help learners learn more effectively.

- Why do learners need to know and understand how their learning is progressing and what they need to do in order to develop?
- How can digital technologies help with AfL?
- Which digital technologies are you using in your scheme of learning for AfL?
- How are you providing feedback to learners on their progress and achievement?
- How has the information gained from formative assessment impacted your scheme of learning?

Learning outcome R: Evaluate lessons to determine the effectiveness that using digital technologies has on learner's learning, and their own practice, using feedback from their mentor and own reflection.

- What evaluation tools and techniques are useful for evaluating lessons in your scheme of learning and your own practice of using digital technologies for teaching and learning?
- What action are you going to take to develop your practice of using digital technologies for teaching and learning?
- What strengths, relating to the use of digital technologies, have you identified in your scheme of learning?
- Which aspects, relating to the use of digital technologies, do you think need adapting in your scheme of learning?
- How can the evaluation of your scheme of learning be enriched by the experiences of colleagues?

The role of the mentor in Module 2

The mentor will support the candidate in choosing two lessons to be observed from their scheme of learning. The mentor will hold a pre-lesson discussion and then observe the candidate delivering each lesson. During the post-observation discussion, the mentor will give feedback to the candidate on the lesson and encourage the candidate to reflect on how effective the lesson was in supporting learners in meeting the stated outcomes. The mentor will help the candidate identify key strengths as well as areas for improvement in their teaching with digital technologies.

Assessment

Assessment in Module 2 focuses on the development of candidates' classroom practice, which is informed by relevant theories, concepts and principles of teaching and learning using digital technologies.

Candidates must plan, prepare and teach from a scheme of learning within their overall teaching programme. They should develop or select the scheme of learning that is most relevant and interesting to themselves, their learners and to their school context, and which puts forward innovative uses of digital technology. From within the scheme of learning candidates must plan, teach and evaluate two lessons. Their mentor must observe both lessons. There should be sufficient time between the first observed lesson and teaching the second lesson for candidates to reflect on their mentor's feedback to help them learn and further develop their use of digital technology. The focus of both observed lessons should be on new ideas and approaches to learning and on teaching using digital technologies.

Candidates will:

- plan a scheme of learning that:
 - occupies a minimum of 10 hours of contact time
 - consists of a minimum of five consecutive lessons, each of 40-120 minutes' duration
 - is with the same group of learners, with a minimum of six learners in the group
 - includes a variety of digital technology which supports learning
- plan two lessons from the scheme of learning
- teach the two lessons
- obtain feedback from their mentor for each lesson.

In the portfolio candidates must submit the following.

Evidence of practice – This includes:

- a *Module 2: Scheme of Learning Form* that includes a brief explanation of the significant changes that will be made to the plan in the next cycle of learning
- Module 2: Lesson Plan Form for each of the two observed lessons
- Module 2: Observer Feedback Form for each of the two observed lessons
- one actual example of a *Module 2: Learning Activity Form* used in one of the two lessons; the activity should provide evidence of the use of digital technology that makes the learning more inclusive
- one actual example of a *Module 2: Formative Assessment Activity* used in one of the two lessons; the activity should provide evidence of the use of digital technology being tried out to more effectively support and monitor the learners' learning.

Evidence of learning (1600 words)

- 1 Explain how you planned the scheme of learning to meet both curriculum and learner needs while incorporating new uses of digital technology.
- 2 Explain the concept of inclusive learning and the impact your understanding had on the planning, preparing and teaching of the two observed lessons using digital technology.
- 3 Discuss why there was an emphasis on using digital technology to develop deeper learning in your classroom practice, supporting your ideas with relevant theories, concepts and principles.

Evidence of reflection (2000 words)

- 1 An evaluation of the highlights and challenges involved in designing a scheme of learning that includes digital technologies to support teaching and promote learning.
- 2 An evaluation of the two lessons:
 - focusing on the role of digital technologies
 - highlighting what worked well and why, and what did not work well and why
 - explaining what developments should be made in future practice.
- 3 An evaluation of the scheme of learning as a whole, focusing on the issues experienced when using digital technologies and their impact on the quality of teaching and learning.
- 4 An evaluation of your professional practice, which uses feedback from a range of sources, including colleague and learner feedback, in order to identify strengths and aspects that need further development.

Module 3 Developing professional practice

In this module candidates will reflect on teaching with digital technologies by carrying out a practitioner inquiry so that they can achieve the following learning outcomes.

Learning outcomes

- **S:** Justify why teachers should develop their reflective thinking skills.
- **T:** Carry out practitioner inquiry to improve own practice in using digital technologies for teaching and learning.
- **U:** Plan and teach a lesson using digital technologies as part of a practitioner inquiry.
- V: Critically analyse and evaluate concepts and theories of teaching and learning with digital technologies
- W: Critically analyse and evaluate practitioner inquiry feedback and data to inform practitioner inquiry outcomes
- **X:** Critically analyse and evaluate the impact carrying out a practitioner inquiry has had on professional practice and learner learning.

Learning outcomes and key questions

Learning outcome S: Justify why teachers should develop their reflective thinking skills.

- What is your understanding of the concept of reflective thinking?
- Why do teachers need to develop reflective thinking skills and what 'models' can be used?
- What strategies do teachers use to develop their reflective thinking skills?
- Why is mentor support important when teachers use their reflective thinking skills to identify aspects of classroom practice requiring further improvement?
- How does reflective thinking help you to identify an aspect of classroom practice that requires further improvement?

Learning outcome T: Carry out practitioner inquiry to improve own practice in using digital technologies for teaching and learning.

- Why do teachers carry out practitioner inquiry to improve professional practice?
- How is a practitioner inquiry used to improve a specific aspect of your practice?
- What educational and research literature must be used when carrying out a practitioner inquiry?
- What barriers or constraints is a teacher likely to face when carrying out a practitioner inquiry?
- What are the advantages and limitations of using a practitioner inquiry to improve your professional practice?

Learning outcome U: Plan and teach a lesson using digital technologies as part of a practitioner inquiry.

- What are the knowledge, skills and attributes associated with effective teachers and teaching?
- What is the purpose of planning and teaching a lesson that is part of a practitioner inquiry?
- What factors must be considered when planning a lesson with digital technologies that is part of a practitioner inquiry?
- What is the focus of mentor feedback when observing a lesson that is part of a practitioner inquiry?
- What methods are used to obtain rigorous feedback from learners when teaching a lesson that is part of a practitioner inquiry?

Learning outcome V: Critically analyse and evaluate concepts and theories of teaching and learning with digital technologies

- What are the differences between critical thinking, critical analysis and critical evaluation?
- Why is it important for teachers to articulate the principles of teaching and learning with digital technologies that underpin their professional practice?
- Why should teachers critically analyse and evaluate concepts, theories and educational literature for teaching and learning with digital technologies?
- How does a teacher critically analyse and evaluate a learning concept, theory or educational literature for teaching and learning with digital technologies?
- What impact has your existing knowledge and understanding of the concepts, theories and principles of teaching and learning with digital technologies had on your teaching practice and your learners' learning?

Learning outcome W: Critically analyse and evaluate practitioner inquiry feedback and data to inform practitioner inquiry outcomes.

- What sources of feedback and data must be obtained when carrying out a practitioner inquiry, and what other sources might be used to inform final outcomes?
- Why is a wide range of sources used to obtain practitioner inquiry feedback and data?
- How can practitioner inquiry feedback and data be analysed and evaluated to establish some initial key findings
- How should the initial key findings from a practitioner inquiry be presented to make them more understandable and communicable to a wider audience?
- Why do teachers critically analyse and evaluate the impact recent developments in their teaching practice have had on their learners' learning?

Learning outcome X: Critically analyse and evaluate the impact carrying out a practitioner inquiry has had on professional practice and learner learning.

- What is your understanding of the concepts of critical analysis, critical evaluation and impact?
- How can learners' progress in learning be monitored and measured?
- What is the concept of triangulation, and why is it used in a practitioner inquiry?
- What impact has the change in your classroom practice by participating in a practitioner inquiry had on your learners' learning?
- How can the outcomes from practitioner inquiry be used to inform the next steps in your professional development?

The role of the mentor in Module 3

Once the candidate and mentor have agreed the area of interest, the mentor will carry out a discussion with the candidate regarding their reason for choosing the area of interest they would like to explore. The mentor will then observe the presentation and take part in the debate that follows the candidate's presentation of their findings to their peers. The mentor will observe the candidate in their practice and support them in developing their professional development plan.

Assessment

Assessment in Module 3 requires a candidate to evidence their developing professional practice by carrying out a practitioner inquiry. They will collaborate with their mentor and select one aspect of their professional practice they want to improve from the list shown below.

- 1 Using digital technologies to develop collaboration skills
- 2 Differentiating and making learning more inclusive with digital technology
- 3 Using digital technologies to develop learners' metacognition skills
- 4 Developing learners' digital research skills
- 5 Developing learners' critical thinking skills
- 6 Using digital technologies to embed formative assessment and feedback methods into classroom practice
- 7 Using digital technologies to develop learners' independent learning skills
- 8 Managing lessons and learner behaviour more effectively when learners use digital technologies
- 9 How to reduce digital inequality and provide equal opportunities to all learners

A practitioner inquiry is based on a cycle of planning, teaching, reviewing and reflection. A candidate will need to work through each of the four stages in an organised manner, as shown in the following table.

Stage	What?	Who?	How?
Plan	 What aspect of professional practice do I want to improve? What question can I pose to keep a focus on the aspect of practice I want to improve? How will I plan the lesson to develop the aspect of practice I want to improve and progress the learners' learning so their needs and curriculum requirements are met? How will I plan for the lesson to be observed by my mentor and obtain focused feedback? How will I obtain rigorous feedback from the learners that focus on the aspect of practice being improved? What concepts, theories and educational literature do I need to engage with to develop new knowledge and understanding? 	Candidate Mentor Colleagues	Module 3: Lesson Plan Form Module 3: Summary of Collaborative Learning Form – must be started when initially engaging with the practitioner inquiry and then maintained throughout the whole process.
Teach	 How successful are the activities used in the lesson to improve required professional practice and progress the learners' learning? How analytical is mentor feedback and does it focus on the aspect of practice being improved and the progress in learner learning? How successful is the method used to obtain rigorous learner feedback, is it focused on the aspect of practice being improved? 	Candidate Mentor Learners	Module 3 – Lesson Activity Review Form Module 3: Observer Feedback Form Module 3: Learner Feedback Form

Stage	What?	Who?	How?
Review	 What are my reflections immediately after teaching the lesson? How will I organise the practitioner inquiry feedback and data so it can be critically analysed and evaluated to identify initial practitioner inquiry findings? How will I present and share my initial practitioner inquiry findings with my mentor, colleagues and other interested parties? How will I obtain feedback from my mentor, colleagues and other interested parties so it can be used at the reflect stage of the process to inform practitioner inquiry outcomes? 	Candidate Mentor Colleagues and other Interested parties	Module 3: Presentation of Initial Findings Form
Reflect	 How will I use my recent experiences and learning from educational research to evaluate the impact the practitioner inquiry process has had on my learners' learning and my own professional practice? How do I know the judgments made are valid and reliable? How will I embed practitioner inquiry findings into my future classroom practice? What other professional development will I carry out in the future to improve my practice? 	Candidate Mentor	Module 3: Summary of Collaborative Learning Form – completed at this stage of the process Module 3: Professional Development Plan Form

In their portfolio candidates will submit the following.

Evidence of practice – This includes:

- 1 Module 3: Lesson Plan Form
- 2 Module 3: Lesson Activity Review Form
- 3 Module 3: Observer Feedback Form
- 4 Module 3: Learner Feedback Form
- 5 Module 3: Presentation of Initial Findings Form
- 6 Module 3: Summary of Collaborative Learning Form
- 7 Module 3: Professional Development Plan Form

Evidence of learning and reflection (3600 words)

- 1 Justify why teachers should develop their reflective thinking skills.
- 2 Explain how you carried out a practitioner inquiry to improve your professional practice.
- 3 Critically evaluate the lesson that was taught and observed as part of your practitioner inquiry.
- 4 Critically analyse and evaluate the learning concepts, theories and educational literature you engaged with during the practitioner inquiry.
- 5 Critically analyse and evaluate the feedback and data obtained from your practitioner inquiry and explain how it was used to inform the outcomes from the process.
- 6 Critically evaluate the impact carrying out a practitioner inquiry has had on your professional practice and the learners' learning.

Assessment criteria

Candidates will be graded for each module according to the following criteria, applied to the portfolio of evidence as a whole:

- 1 Understanding teaching and learning with digital technologies.
- 2 Developing thinking and practice with digital technologies.
- 3 Analysis and discussion.
- 4 Communication and presentation.

DISTINCTION	
Understanding teaching and learning with digital technologies	Demonstrates a detailed, accurate and well-informed understanding of key concepts and principles, with some evaluation of different ideas or approaches. Evidence of some sustained critical analysis and evaluation in their application to both their own and others' practice.
Developing thinking and practice in teaching with digital technologies	Evidences effective practice in detail and with insight, and with awareness and appropriate analysis of how different theories and principles apply to practice. Well-developed application of a number of theories and principles to own practice. Well-developed reflective evaluation of own practice and specific ways of learning from experience.
Analysis and discussion	Analyses, with insight and in detail, questions and issues drawn from relevant and topical studies, enquiries and experience. Relevant and appropriately depicted examples drawn from well-established evidence. Range of different and relevant information sources to inform analysis and discussion. Well-structured approach.
Communication and presentation	Presents ideas, arguments and information in a well-structured, consistent and clearly expressed manner. Presentation of work is highly professional, and views/opinions supported by external reference to relevant sources. Academic conventions followed consistently throughout the work, with referencing to published or other accepted sources of evidence that are current.

PASS	
Understanding teaching and learning with digital technologies	Demonstrates a sound and informed understanding of key concepts and principles, with an awareness of different ideas or approaches. Analyses and evaluates application of key concepts and principles to both their own and others' practice.
Developing thinking and practice in teaching with digital technologies	Evidences effective practice with detail, in some areas. Thorough and informed understanding of how different theories and principles apply to practice. Sound application of theories and principles to practice. Evidence of reflective evaluation of own practice, and some insight into learning from experience.
Analysis and discussion	Analyses questions and issues arising from appropriate studies, enquiries and experience, appropriately and with relevance. Evidence of use of different information sources to support discussion and analysis. Structured approach to analysis and discussion.
Communication and presentation	Presents ideas, arguments and information in a well-ordered manner, with sound levels of consistency and expression. Professional presentation of work, with use of external sources of evidence. Academic conventions followed, with use of accepted referencing conventions.
FAIL	
Understanding teaching and learning with digital technologies	Demonstrates inadequate or poor understanding of relevant concepts and principles. Application to own and others' practice may be limited, inadequate or inappropriately applied. Application to others' practices may be absent.
Developing thinking and practice in teaching with digital technologies	Little or poor evidence of linking effective practice with theories and principles. Limited or inaccurate understanding of relevant theories and practice. Little evidence of application of theories and principles to own practice.
Analysis and discussion	Descriptive approach, with some inaccuracies and misunderstandings in places. Opinions and views expressed, but poor or inappropriate links to evidence and/or relevant examples. Work likely to be poorly organised and structured.
Communication and presentation	Work demonstrates weaknesses in presentation and may be poorly structured and not presented in a professional manner. Opinions may be given without any attempt to provide support from other accepted external sources.

5 Support and resources for PDQ programmes

We provide a wide range of practical resources, detailed guidance and innovative support so that Programme Leaders can give their candidates the best possible preparation for Cambridge PDQs.

Support and resources

Programme Planning and delivery

Syllabus

The Cambridge International Professional Development Qualification (PDQ) syllabus

Syllabus Support Guides

Exemplify the Learning Outcome and Assessment Criteria requirements for each PDQ syllabus

PDQ Programme Leader Community

An online community for Programme Leaders to share and collaborate

Portfolio creation and development

Sample Evidence

Examples of completed evidence with a commentary from the Principal Examiner

Getting started with...

Interactive resources which introduce and develop key areas of teaching and learning practice

Principal Examiner Reports

Annual reports completed by the Principal Examiner for each syllabus

Webinars

Recorded sessions looking at different aspects of the PDQ Assessment requirements

Training

PDQ Programme Leader Course

Training provided by Cambridge for aspiring PDQ Programme Leaders

Online Training

Introductory, Extension, Enrichment and Assessment courses, available online here: www.cambridgeinternational.org/support-and-training-for-schools/professional-development

Support for Mentors

www.cambridgeinternational.org/Images/304230-a-guide-for-mentors.pdf

'Getting started with mentoring' is also available as an online enrichment course:

www.cambridgeinternational.org/support-and-training-for-schools/professional-development/enrichment-courses/online-enrichment

Continuing professional development

Education briefs

www.cambridgeinternational.org/support-and-training-for-schools/teaching-cambridge-at-your-school/education-briefs

Further study towards PGCE, MA or MBA

www.cambridgeinternational.org/support-and-training-for-schools/professional-development/professional-development-qualifications/teacher-development-journey

Note: Cambridge has secured this route into Higher Education study for all those that hold a PDQ Diploma. Cambridge Programme Leaders cannot claim credits towards this themselves, unless they also hold a PDQ Diploma, but the journey may still be of interest to them.

What is PDQ Connect?

PDQ Connect is the platform used by Cambridge International to support the delivery of PDQ Programmes, and where Programme Leaders can find resources, templates and forms. Use of the platform allows Programme Leaders to support candidates to collate, develop and enhance their portfolio evidence prior to final submission.

Final submission of the completed PDQ portfolio of evidence to Cambridge International must be made using the correct PDQ templates (*Forms*) as specified in each syllabus, and in accordance with the current submission guidance and series deadlines as laid out in the *Administrative Guide*. The *Administrative Guide* is for exams officers who are making the final submission of the portfolio to Cambridge for grading.

Cambridge International is committed to ensuring that all assessments are 'fair, have sound ethical underpinning, and operate according to the highest technical standards' (The Cambridge Approach 2009). Cambridge International expects technology to be used to enhance the assessment process in terms of reliability, validity, accessibility as well as efficiency, and not to dilute its quality (Craven 2009).

- Validity: Assessment should measure what it claims to measure and what it is important to measure; there
 must be a close fit between the assessment methods and the learning outcomes.
- Authenticity: All assessment practices must have processes in place to ensure that the evidence for assessment is the learner's work.
- Reliability and consistency: Assessment should be capable of generating sufficient evidence for the target level.

6 Glossary

The following definitions apply throughout this syllabus.

Word or phrase	What it means
Achievement	measures the improvement in a learner's performance over a period of time as the result of a process of learning; this is reflected in their grades
Acquisition model of learning	learning is seen mainly as acquiring knowledge and skills through direct instruction
Active learning	based on the theory of constructivism where learners participate in a variety of activities that promote engagement with learning resources, ideas and other people; it then requires them to think hard in order to make sense of their new learning by linking it to their existing learning
Advance organisers	strategies that connect new learning to existing learning
Aim	a broad statement of intent indicating what the teacher must teach and the learners must learn during a process of learning
Analysis	process of studying or examining something carefully and in detail to learn more about it
Assessment	any activity in which evidence of learning is collected in a planned and systematic way and then used to make a judgement about what learners know, understand and are able to do
Assessment criteria	freestanding statements that specify the standard required to achieve a learning outcome or objective.
Assessment for learning	based on the concept of teachers embedding the strategies of questioning, formative feedback, peer and self-assessment, and the formative use of summative assessments in their classroom practice; assessment information is then used by teachers to adjust their teaching strategies and by learners to adjust their learning strategies
Assessment of learning	an alternative term for summative assessment
Asynchronous learning	Asynchronous learning allows learners to train individually, enabling them to complete courses at a time, place and pace that suits them.
Attainment	the level or standard reached by a learner at the end of a learning sequence or learning programme that is evidenced by test or examination results
Behaviourism	theory of learning based on the concept that all behaviours are learned through interaction with the environment to the near exclusion of innate or inherited factors

Word or phrase	What it means
Blended learning	A style of education in which learners learn via electronic and online media as well as traditional face-to-face teaching.
	Blended learning is the combination of traditional, face-to-face learning methods with technology-based online learning methods. It has also been described as a blending of live training and self-paced training.
Candidate	the person following a Cambridge Professional Development syllabus
Cognition	process of acquiring knowledge and understanding through thought, experience, and the senses
Cognitivism	theory of learning based on the concept of how learners acquire new learning through perception, thinking, remembering, reasoning and judging
Collaboration	working with one or more colleagues for a particular purpose or to achieve a common goal
Competence	ability to repeatedly do something well
Constructivism	theory of learning based on the concept that all learners 'construct' their own unique meanings or understanding of experiences by reflecting or thinking about them
Cooperation	working together to accomplish shared goals
Critique	a detailed analysis and judgement, both positive and negative, of a person's work or ideas
Criterion- referencing	describe the qualities of what a learner knows, understands and is able to do without reference to the performance of others
Critical evaluation	making judgements through a process of critical thinking and analysis
Critical thinking	careful goal-directed thinking; it is a way of thinking about any subject, content or problem by analysing the facts to form a judgement
Curriculum	academic content taught in a school or in a specific course or learning programme; it is usually presented as syllabuses for sequential stages of learners' learning
Dialogic teaching	involves on-going talk between the teacher and learners; it provides learners with opportunities to contribute to classroom dialogue in extended and varied ways so they can explore the limits of their own understanding through the use of language
Didactic teaching	learning is seen as mainly acquiring knowledge and skills as the direct result of teaching
Differentiated learning	strategies used to accommodate the differences between learners so they all have the best possible chance of progressing their learning
Evaluate	to judge or determine the quality, importance or value of something
Experiential learning	process that involves learners engaging with a variety of experiences and then through reflection, creating links with existing learning to form new learning

Word or phrase	What it means
Explore	think about an idea or topic in order to assess it carefully
Formative assessment	assessment methods used by teachers to check the learners' understanding of the topic being taught at different stages of a lesson
Gamification	the application of typical elements of game playing (e.g. point scoring, competition with others, rules of play) to other areas of activity such as teaching and learning activities
Higher-order thinking skills	requires learners to use their analytical, evaluative and creative thinking skills in a range of activities to progress their learning
Humanism	theory of learning based on the concept that the development of the whole person is considered more important than the development of specific subject matter
Inclusive learning	the learners' entitlement to a learning experience that respects diversity, enables participation, removes barriers and anticipates and considers a variety of learning needs and preferences
Key questions	indicate the professional learning related to a learning outcome
LCMS (Learning Content Management System)	once distinguished from the term learning management system (LMS) the two are now mostly interchangeable, like an LMS, an LCMS manages the creation, storage and delivery of eLearning content
Learner	we use 'learner' in a general, aspirational sense
Learning objective	brief description of what the learners must know or be able to do as a result of their learning experiences
Learning outcome	brief description of what the learners must know or be able to do as a result of their learning experiences at the end of a course, learning programme, module or unit; it specifically relates to the learning that will be assessed
Lower-order thinking skills	requires learners to use their skills of remembering, understanding and applying their learning in a range of activities
Mentor	an experienced colleague who provides support, advice and guidance to help develop the personal and professional growth of a less experienced colleague
Metacognition	concept that requires learners to reflect or think about how they learn and then intentionally apply the outcomes of their reflective thinking to improve future learning
Motivation	a learner's willingness to participate in the learning process
Norm- referencing	comparing one learner's performance with that of everyone else being assessed
Participation model of learning	creating personal meaning by reflecting on shared experiences and then applying it in different situations
Pedagogy	the study and theory of the methods and principles of teaching

Word or phrase	What it means
Practitioner inquiry	a collaborative four-stage cycle of planning, teaching, reviewing and reflecting designed to improve an aspect of a teacher's classroom practice and ultimately their learners' learning and achievement
Reflection in action	reflecting during an experience, it can also be thought of as 'thinking on our feet' and involves making decisions or changes to practice during the experience as the situation demands
Reflection on action	reflecting after the experience, can also be thought of as making decisions or changes to practice as a result of retrospective thinking
Reflective account	an account of an event or a process that is not simply descriptive; it addresses evaluative questions as well as how and why questions
Reflective journal	a document in digital or traditional book format can be used to record experiences; it is subsequently used to critically reflect on learning or practice in order to improve future learning or teaching practice
Reflective practice	learning through and from experience towards gaining new insights into self and practice
Reflective thinking	consciously thinking about analysing what you are doing, what you have previously done, what you have experienced, what and how you have learned
Reliability	how well a test consistently measures what it is supposed to measure; reliability exists if repeat marking of a single assessment by a second or third examiner produces the same outcome, or if the learner achieves the same outcome when taking a second version of the same test.
SAMR model	The SAMR Model is a framework created by Dr Ruben Puentedura that categorizes four different degrees of classroom technology integration. The letters 'SAMR' stand for Substitution, Augmentation, Modification, and Redefinition
Scaffolding of learning	providing one or more learners with support from the teacher and/or peers when learning new concepts; the support is reduced as the learners become more independent in their thinking and ability to acquire new knowledge and skills
Scheme of learning	also known as a programme plan or scheme of work; an interpretation of a syllabus into a sequence of lessons
Self regulation	describes how learners monitor and control their cognitive processes
Social constructivism	theory of learning that stresses the fundamental role of social interaction in the development of cognition
Special education needs	refers to learners who experience learning difficulties that make it harder for them to learn than most children and young people of the same age
Spiral of learning	learning is structured so that concepts and ideas are initially taught at a simplified level and then re-visited at more complex levels later on

Word or phrase	What it means
Success criteria	summarise the key steps needed for learners to successfully meet a learning intention by specifying the main things to do, include or focus on
Summative assessment	assessment methods used to evidence what the learners have learned at a given point in time, usually at the end of a course, module, unit, theme or topic
Synchronous learning	Synchronous learning is instructor-led learning in a virtual classroom setting. Learners log on at the same time and an instructor guides the class
Teacher	this is used to refer to anyone holding the position of teacher; it could be the candidate's colleagues or used in a general sense
Tutorial	a short class conducted by a teacher for one learner or a small number of learners, usually focused on personal target-setting and reflection on the learners' own learning
Validity	how well a test measures what it is supposed to measure
Zone of Proximal Development	a learner's ability to perform learning tasks just beyond their current abilities with guidance and support from the teacher and/or peers

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