Approaches to Digital Learning and Technology Use Policy

A Digital Learning Framework for the Senior School at Brighton College (Singapore)

Overview

This policy establishes a shared, evidence-informed approach to digital learning at Brighton College (Singapore) Senior School (BCS). It defines the professional expectations for the use of technology, including Generative Artificial Intelligence (GenAI), within teaching and learning.

At BCS, technology is understood as a professional tool, not a default classroom presence. Its use is guided by the principle that digital tools should enhance the quality of thinking, feedback, and learning, rather than simply increase efficiency or replace established pedagogical practices.

This approach is grounded in research from cognitive science and educational technology, which demonstrates that pupils learn most effectively when they engage in active thinking, retrieval, practice, and dialogue (Mayer, 2021; Sweller et al., 2011). Technology must therefore support these processes, rather than compete with attention or reduce cognitive engagement.

BCS adopts the PICRAT framework (Kimmons et al., 2020) as a shared model for evaluating technology's impact on learning. This ensures that digital tools are used intentionally in ways that are interactive, creative, and transformative, rather than passive or substitutive.

The policy also addresses the use of Generative AI, recognising both its potential to support learning and the risks it presents to critical thinking and academic integrity. GenAI is therefore positioned as a tool to support reasoning, reflection, and feedback, not to replace the intellectual effort required for learning (UNESCO, 2023).

This policy is purposefully aligned with our Digital Strategy, Cognita's Digital Learning Frameworks and Digital Maturity Scale, and forms part of the College's wider commitment to academic rigour, digital fluency, and responsible technology use and should be read in conjunction with our AI Policy, Acceptable Use Policy, Digital Safety Policy and Academic Integrity Policy.

The overall aim of this policy is not to increase screen time, but to maximise learning impact.

1. Purpose

The purpose of this policy is to define the professional expectations for the use of digital technology in teaching and learning at Brighton College (Singapore) Senior School. In a 1:1 device environment, technology is readily available. Without clear guidance, there is a risk that digital tools are used by default rather than by design, leading to reduced attention, passive learning, and diminished cognitive engagement. This policy provides a framework to ensure technology is used deliberately to enhance learning. It establishes a shared approach to digital learning across the College, supporting consistency while recognising teachers' professional judgement in different subjects and contexts.

The policy is aligned with the College Digital Strategy and Cognita Digital Learning frameworks, translating these priorities into clear expectations for classroom practice. It also provides guidance on the use of Generative AI to ensure it supports critical thinking, academic integrity, and

responsible digital citizenship. The policy's central aim is not to increase technology use, but to ensure that all technology use demonstrably improves the quality of teaching and learning.

2. Pedagogical and Research Foundations

Our approach to digital learning is grounded in research from cognitive science and effective teaching. This research provides a clear understanding of how pupils learn and, therefore, how technology should be used to support that learning. While cognitive science provides a strong foundation for understanding learning, this approach is complemented by socio-cultural perspectives which emphasise dialogue, collaboration, and the role of context in knowledge construction.

Learning is not the passive absorption of information. It is an active process in which pupils construct understanding through thinking, practice, and feedback. Research indicates that pupils learn most effectively when they engage in retrieval, apply knowledge, receive timely feedback, and participate in dialogue (Mayer, 2021; Sweller et al., 2011). These processes require attention, effort, and cognitive engagement.

Technology can support these processes but also undermine them. When used effectively, digital tools can enhance feedback, enable collaboration, support modelling, and provide access to rich representations of knowledge. Technology can also support inclusive teaching to reduce learning barriers and promote equitable access to our school curriculum. Technology can also be an excellent tool to provide additional scaffolding for pupils with specific needs in the classroom. However, when used passively or without a clear purpose, technology can fragment attention, increase cognitive load, and reduce opportunities for thinking (Kirschner & De Bruyckere, 2017).

This distinction is critical. The impact of technology on learning is determined not by the tool itself, but by how it is used within the learning process (Hattie, 2009). Simply replacing traditional tasks with digital alternatives does not improve learning and may in some cases reduce its effectiveness.

For this reason, technology use at BCS is guided by the principle that digital tools should support active, cognitively demanding learning. Pupils should be engaged in thinking, questioning, creating, and refining their understanding, rather than passively consuming information.

This principle is particularly important in a 1:1 device environment, where technology can easily lead to distraction or superficial engagement if not carefully managed. Teachers must therefore make deliberate decisions about when to use technology, how to use it, and whether it adds value to learning.

To support consistent, evidence-informed decision-making, the College adopts the PICRAT framework (Kimmons et al., 2020), which provides a professional model for evaluating the educational impact of technology use.

The same principles apply to the use of Generative AI. While AI has the potential to support feedback, explanation, and exploration, it also risks reducing cognitive effort when used to

generate answers without engagement. Its use must therefore be carefully designed to support critical thinking rather than replace it (UNESCO, 2023).

In summary, effective digital learning at BCS is defined not by the presence of technology, but by the extent to which it supports deep thinking, meaningful practice, and high-quality teaching.

3. Professional Decision Framework: PICRAT

To support consistent, evidence-informed decision-making, Brighton College (Singapore) adopts the PICRAT framework (Kimmons et al., 2020) as its shared model for evaluating the educational impact of technology use.

The framework recognises that the effectiveness of technology is determined not by the tool itself, but by how it is used within the learning process. It provides a structured way for teachers to consider both how pupils engage with technology and how technology changes the nature of the learning task.

PICRAT evaluates two dimensions:

Pupil Relationship with Technology

- Passive – pupils receive or consume information
- Interactive – pupils respond, practise, or engage with content
- Creative – pupils produce, design, or construct new understanding

Impact of Technology on the Task

- Replace – technology substitutes traditional methods with no functional improvement
- Amplify – technology improves efficiency, access, or feedback
- Transform – technology enables new forms of learning that would otherwise be difficult or impossible

3.1 Professional Expectation at BCS

The PICRAT framework is not a compliance tool, but a professional lens to support high-quality teaching. At BCS, effective use of technology is characterised by:

- Interactive or Creative engagement, where pupils are actively thinking, responding, or creating.
- Amplify or Transform impact, where technology enhances feedback, understanding, or representation.

Teachers should be cautious of uses that are both:

- Passive, where pupils are primarily consuming information
- Replacement where technology does not add meaningful value

Such uses are unlikely to improve learning and may reduce cognitive engagement.

This aligns with research indicating that learning is most effective when pupils are actively engaged in thinking, practice, and feedback (Mayer, 2021; Sweller et al., 2011).

3.2 Using PICRAT in Practice

PICRAT should be used as a reflective tool during planning. Teachers should consider:

- How are pupils engaging with the technology?
- Does this task require thinking or primarily consumption?
- What does the technology add that could not be achieved without it?

If technology does not improve the quality of thinking, feedback, or representation, it should not be used.

3.3 Examples of PICRAT in Practice

Learning Task	PICRAT Evaluation
Pupils copy teacher slides into a digital notebook	**Replace** – no improvement in learning or thinking
Pupils watch a video without questioning or follow-up	**Passive –** minimal engagement
Pupils complete a structured retrieval quiz with immediate feedback	**Interactive / Amplify –** supports practice and reinforcement
Pupils annotate a text digitally, responding to prompts and questions	**Interactive –** requires active engagement with content
Pupils answer hinge questions during a lesson using polling tools to check understanding	**Interactive / Amplify** – supports formative assessment
Pupils use a shared document to draft and peer-review writing	**Interactive / Amplify –** supports feedback and collaboration
Pupils manipulate variables in a simulation to test hypotheses	**Creative / Transform –** enables deeper conceptual understanding
Pupils analyse and interpret data using spreadsheets and visualisation tools	**Interactive / Transform –** supports analytical thinking
Pupils use GenAI to generate an answer and submit it directly	**Replace / Passive** – reduces cognitive engagement
Pupils use GenAI to critique their work and refine their thinking (Year 9 +)	**Creative / Transform** – extends modes of expression
Pupils compare multiple AI outputs and evaluate accuracy and bias	**Creative / Transform –** promotes critical thinking

These examples illustrate that the same technology can have very different impacts depending on how it is used.

3.3 PICRAT and Generative AI

The PICRAT framework is particularly important when evaluating the use of Generative AI.

GenAI can be used in ways that are:

- Passive, where pupils accept generated responses
- Interactive, where pupils question, refine, and respond to outputs
- Creative, where pupils use AI to develop and extend ideas

Similarly, GenAI can:

- Replace thinking by generating answers
- Amplify learning by providing feedback
- Transform learning by enabling evaluation, critique, and iteration

At BCS, the use of GenAI should prioritise interactive and creative engagement, and amplify or transform impact, ensuring that pupils remain cognitively engaged and should only be used by pupils in Year 9 and above.

4. Expectations for Teaching Practice

The effective use of technology at BCS is determined by the quality of teaching, not by the presence of devices. Technology should be used deliberately to support learning, and its use should be shaped by subject context, professional judgement, and the principles outlined in this policy. The following expectations define high-quality digital practice in the Senior School.

4.1 Intentional Planning

Technology should be used with a clear purpose. It must be explicitly linked to learning objectives and should improve the quality of thinking, feedback, or representation. Use of devices should be planned, purposeful and time-bound, rather than open-ended. Tasks involving digital devices should be specific and clearly directed, including guidance to named websites or platforms. Unsupervised browsing is not permitted. Teachers are expected to consider whether technology offers a meaningful advantage over non-digital approaches. Where it does not, non-digital methods should be used.

Effective planning involves asking:

- What does this technology improve?
- Does it deepen understanding or support thinking?
- Is it the most effective approach for this task?

4.2 Active Learning and Cognitive Engagement

Digital technology should support active, cognitively demanding learning. Pupils should be engaged in thinking, questioning, practising, and creating, rather than passively consuming information. Where technology is used, it should prioritise:

- retrieval and practice
- problem-solving and analysis
- collaboration and discussion
- reflection and feedback

Extended periods of passive screen use should be avoided. Technology that does not require thinking is unlikely to support learning.

4.3 Focus, Attention, and Cognitive Load

The presence of devices can divide attention and increase cognitive load. Teachers must therefore establish clear routines that protect focus and support learning. In the Senior School at BCS, we promote a balanced approach to technology and digital learning to ensure that pupils develop the ability for sustained attention and the cognitive routines necessary for deep and effective learning.

Devices should not compete with explanation, questioning, or discussion. All lessons begin with devices stored away and are only taken out when explicitly requested by the teacher. Throughout the lesson, devices should be closed to ensure that pupils are fully engaged in listening and thinking during group discussions and explicit teaching episodes. Teachers should minimise multitasking and ensure that technology use supports, rather than disrupts, concentration. Teachers are expected to maintain active oversight during device-based activities.
This includes the ability to:

- monitor pupil screens
- intervene promptly when pupils are off task
- ensure online behaviour aligns with school expectations
- apply sanctions where necessary in line with the Behaviour Policy

4.4 Curated Research and Information Literacy

Access to information does not equate to understanding. Unstructured searching can lead to superficial learning and misconceptions. Teachers should provide curated resources and structured research tasks that guide pupils towards high-quality information. Pupils should be taught to evaluate sources critically, recognise bias, and develop informed judgements.

This approach supports the development of digital literacy as a critical and analytical skill, rather than a purely functional one.

4.5 Human Interaction and Feedback

Technology must not replace the core elements of effective teaching, including explanation, questioning, dialogue, and feedback. High-quality interaction between teachers and pupils remains central to learning.

Digital tools should be used to support and enhance feedback, not to substitute for professional judgement.

4.6 Creativity and Expression

Pupils benefit from a range of modes of expression, including writing, discussion, performance, practical work, and digital creation. Technology should extend these opportunities by enabling pupils to represent their understanding in different ways. However, it should not narrow learning to screen-based tasks alone.

A balanced approach ensures that digital and non-digital methods are used purposefully to support learning.

4.7 Gamification in Learning

Gamification refers to the deliberate use of game design elements, such as structured challenges, progression pathways, feedback systems, and goal-oriented tasks, within learning activities to support engagement and sustained effort (Deterding et al., 2011). In the Senior School, gamification is understood as a pedagogical design approach, not as the addition of rewards, points, or entertainment. In Senior School contexts, gamification must be carefully balanced to avoid trivialising complex subject content or reducing intellectual challenge. The purpose of gamification is to support sustained engagement with cognitively demanding learning by:

- encouraging persistence and effort over time
- providing clear goals and success criteria
- supporting structured progression towards mastery
- enabling timely and meaningful feedback

However, gamification does not inherently improve learning. Its effectiveness depends on whether it strengthens pupils' thinking, understanding, and engagement with subject content, rather than diverting attention towards superficial goals (Sailer & Homner, 2020). As with all uses of technology, gamification must be applied selectively and only where it demonstrably enhances the quality of learning.

Research indicates that gamification can have a positive impact on motivation and achievement when aligned with learning objectives, although outcomes are highly context-dependent (Sailer & Homner, 2020). In secondary contexts, its effectiveness is most evident where it supports deliberate practice, feedback, and progression, rather than short-term engagement.

Gamification is most effective when it:

- requires sustained cognitive engagement and effort
- provides immediate, specific feedback linked to learning
- supports progression through increasingly complex and challenging tasks
- reinforces retrieval, practice, and application of knowledge

These features align with established principles of effective learning, including cognitive load theory and explicit instruction (Rosenshine, 2012; Mayer, 2020; Sweller et al., 2011). However, research also highlights important limitations. Gamification approaches that rely heavily on extrinsic rewards, such as points, badges, or leaderboards, may reduce intrinsic motivation and shift pupils' focus away from learning (Deci et al., 2001; Sailer et al., 2017). Competitive structures, particularly those involving public ranking, may negatively affect pupils' sense of competence and engagement, especially in mixed-attainment classrooms (Hanus & Fox, 2015).

This aligns with Self-Determination Theory (Deci & Ryan, 2000), which emphasises that motivation is strongest when three core psychological needs are supported:

- Autonomy – a sense of choice and control
- Competence – a sense of progress and success
- Relatedness – a sense of belonging and collaboration

Gamification is therefore most effective when it supports these needs, rather than replacing them with external incentives.

4.7.1 Alignment with PICRAT

Gamification must be evaluated through the PICRAT framework to ensure that it enhances, rather than dilutes, learning:

Passive(Replace)

Gamified activities that reward completion without requiring thinking (e.g. points for passive participation) do not improve learning and should be avoided.

Interactive(Amplify)

Gamification that requires pupils to apply knowledge, make decisions, and respond to feedback can strengthen learning where it improves practice, engagement, and understanding.

Creative(Transform)

Gamification that enables pupils to explore, design, and construct understanding—such as problem-based challenges or simulations—represents the most effective use, particularly where it supports higher-order thinking.

In all cases, gamification should be used to amplify or transform learning, not to replace effective teaching with surface-level activity.

4.7.2 Principles for Effective Use

In the Senior School, gamification should:

- focus on mastery, progression, and depth of understanding, rather than competition
- require pupils to think, apply, analyse, and evaluate, not simply complete tasks
- provide immediate, specific feedback linked to learning
- support progression through increasingly demanding and challenging tasks
- be used selectively and purposefully within a wider pedagogical approach

Gamification should not:

- rely on public leaderboards or ranking systems
- prioritise speed or completion over understanding
- emphasise rewards over learning processes
- replace teacher explanation, questioning, or feedback
- reduce opportunities for dialogue, reflection, or independent thinking

4.7.3 Role of the Teacher

Teachers are responsible for ensuring that gamification enhances, rather than distracts from, learning. They should:

- define the learning purpose of any gamified activity
- ensure tasks require sustained cognitive engagement
- monitor pupil motivation, engagement, and wellbeing
- provide ongoing feedback and adapt approaches as needed
- discontinue gamified approaches where they do not improve learning

Gamification must never replace professional judgement, high-quality teaching, or formative assessment.

4.7.4 Key Principle

Gamification is a tool to support sustained engagement with learning, not a solution in itself. Its value depends entirely on how effectively it promotes thinking, feedback, and meaningful progress. Where gamification does not demonstrably improve learning, it should not be used.

5. Generative AI in Teaching and Learning

Generative Artificial Intelligence (GenAI) is an increasingly significant feature of the educational landscape. At Brighton College (Singapore), it is recognised as a powerful tool that can enhance teaching and learning. However, its value lies not in the technology itself, but in how it is used in the learning process.

Research indicates that digital technologies can support learning by enhancing feedback, providing explanations, and enabling new forms of interaction with knowledge (Holmes et al., 2019; UNESCO, 2023). Generative AI offers opportunities for pupils to access immediate feedback, explore alternative perspectives, and refine their work. However, these benefits are contingent on pupils remaining cognitively engaged. Where AI is used to generate responses without requiring thought, analysis, or evaluation, it may reduce the cognitive processes that underpin learning (Mayer, 2021).

This distinction is critical. Learning depends on effortful thinking, retrieval, and the active construction of understanding. This aligns with research on cognitive offloading, where reliance on technology can reduce the need for internal cognitive processing if not carefully managed (Risko & Gilbert, 2016).

At BCS, the use of GenAI is therefore guided by the principle that it should support, extend, and challenge thinking, rather than replace it. Pupils should be encouraged to engage critically with AI-generated outputs, to question their accuracy, identify limitations, and use them as a basis for further reasoning and development. In this way, AI can act as a stimulus for thinking rather than a substitute for it.

The relationship between GenAI and critical thinking is central to this approach. When used effectively, GenAI can support higher-order thinking by enabling pupils to compare perspectives, evaluate arguments, and refine their own understanding. However, when used uncritically, it can lead to superficial engagement, where responses are accepted without analysis. The educational value of GenAI, therefore, lies not in its ability to produce answers but in its capacity to provoke evaluation, reflection, and improvement.

The use of GenAI also raises important considerations for academic integrity. Pupils must develop a clear understanding of the difference between using AI as a tool to support learning and using it to produce work that is presented as their own. At BCS, pupils are expected to use AI transparently and appropriately, in line with our Acceptable Use of Technology and Academic Integrity Policy. Teachers must design learning and assessment in ways that preserve the authenticity of pupil work. This may include the use of:

- controlled in-class writing tasks
- iterative processes (process over product)
- structured oral questioning

Assessment design must ensure that pupils retain primary responsibility for the cognitive processes underpinning their learning.

To support consistency across the College, the use of GenAI is guided by the College AI Policy, the Acceptable Use Policy, and associated guidance for staff and pupils. These documents provide a

shared framework for safe, ethical, and responsible use. Within this framework, teachers retain professional responsibility for determining how and when to use AI in their classrooms.

In practice, the use of GenAI should be carefully defined within each learning context. There will be occasions where the use of AI is not appropriate, particularly where the purpose of a task is to assess independent understanding. In other contexts, AI may be used more narrowly to support planning, feedback, or clarification. In some cases, it may be fully integrated into the learning process, particularly when pupils are evaluating, critiquing, or refining ideas. In all cases, expectations should be made explicit to pupils.

The PICRAT framework (Kimmons et al., 2020) offers a useful lens for evaluating the use of GenAI. AI can be used in passive ways, where pupils accept outputs without engagement, or in interactive, creative ways, where pupils question, refine, and build on AI-generated responses. Similarly, AI can replace thinking or amplify and transform learning by supporting feedback, evaluation, and iteration. At BCS, effective use of AI is characterised by approaches that maintain cognitive engagement and extend learning, rather than reduce it.

Teachers play a central role in ensuring that the use of GenAI enhances learning. This includes modelling appropriate use, teaching pupils to evaluate outputs critically, and designing tasks that require thinking, reasoning, and originality. The use of GenAI must remain under the teacher's professional oversight and align with school policies and expectations.

The use of Generative AI is introduced from Year 9 onwards, in line with school guidance. As pupils develop greater independence, they are supported in using GenAI in ethical, critical, and purposeful ways. While pupils in Years 7 and 8 are not permitted to use Generative AI tools, they begin to learn about Artificial Intelligence within the Computing curriculum. This ensures that pupils develop an understanding of how AI works, the expectations around its use, and its potential impact on learning. In summary, Generative AI can support learning when used thoughtfully; its effectiveness depends on maintaining a clear focus on cognitive engagement, critical thinking, and academic integrity.

5.1 AI Use in Learning Tasks: The Traffic Light Model

Teachers should feel empowered to make professional decisions about where and how they use GenAI to support and enhance learning. To ensure clarity and consistency, BCS adopts a Traffic Light model to guide the use of GenAI for Year 9 pupils and above across different learning contexts. This model recognises that the appropriateness of GenAI depends on the task's purpose and the nature of the learning.

Red – GenAI Not Permitted

There are contexts in which using AI would undermine the validity of learning or assessment. In these situations, pupils must engage directly in the cognitive processes required to develop understanding. This includes formal assessments, examinations, and tasks designed to evaluate independent thinking or to acquire new knowledge. In such contexts, the use of GenAI is not appropriate, as it risks replacing the effortful thinking that underpins learning. The use of GenAI by a pupil when GenAI is specifically not allowed will be treated as a misuse of technology and academic dishonesty and teachers should follow the steps highlighted in the behaviour management policy and the academic integrity policy.

Amber – Limited GenAI Use with Teacher Direction

In many learning contexts, GenAI can be used in a limited and purposeful way to support learning, provided that pupils remain the primary agents of thinking. In these cases, GenAI may be used to support processes such as planning, clarification, or feedback. For example, pupils might use GenAI to generate practice questions, receive feedback on drafts, or clarify aspects of their understanding. The role of GenAI in these contexts is to support refinement and improvement, rather than to generate final responses.

Green – GenAI Integrated into Learning

There are also contexts in which GenAI can be more fully integrated into the learning process, particularly where the focus is on evaluation, critique, and iteration. In these cases, pupils engage with GenAI outputs as objects of analysis, questioning their accuracy, identifying limitations, and improving upon them. This type of use supports higher-order thinking, including evaluation and metacognition, which are central to deep learning (Mayer, 2021).

In all cases, expectations for AI use should be made explicit to pupils. Teachers must ensure that GenAI use aligns with the task's purpose and that pupils remain cognitively engaged in the learning process.

6. Managing Technology in the Learning Environment

The Senior School operates within a 1:1 device environment, where each pupil has access to a personal MacBook. This provides significant opportunities for learning, including access to resources, collaboration, and the use of subject-specific tools. However, it also presents challenges, particularly regarding attention, distraction, and the risk of technology being used without a clear purpose.

In this context, technology must be managed carefully. The availability of a device does not imply that it should be used continuously. Rather, its use should be driven by learning, with clear decisions on when technology is appropriate and when non-digital approaches are more effective.

Teachers play a central role in establishing this balance. They are responsible for setting clear expectations for when devices are used, when they are not required, and how they support learning. At key points in a lesson, particularly during explanation, questioning, and discussion, it may be appropriate for devices to be closed to ensure that pupils are fully focused on the learning.

A balanced approach to digital learning is essential. While technology can support collaboration, feedback, and creativity, it should sit alongside, rather than replace, other forms of learning. Discussion, writing, practical work, and direct interaction remain central to effective teaching. The aim is not to maximise screen time, but to use technology to enhance learning.

The use of technology should also reflect the nature of the subject. Different disciplines require different approaches, and teachers should use their professional judgement to determine how technology best supports learning within their subject area.

As pupils progress through the Senior School, they are expected to develop increasing independence in their use of technology. This includes managing their attention, making appropriate decisions about when to use digital tools, and using technology to support their learning.

7. Professional Responsibilities

The effective use of technology in teaching and learning is a matter of professional judgement. At Brighton College (Singapore), teachers are trusted to make informed decisions about when and how to use digital tools, guided by the principles set out in this policy.

Teachers are expected to use technology to enhance learning, support thinking, and maintain academic rigour. This includes selecting appropriate tools, designing tasks that require cognitive engagement, and ensuring that technology is used with a clear purpose. The presence of technology should never diminish the quality of teaching or reduce opportunities for pupils to think deeply about their learning.

The PICRAT framework provides a shared professional model to support these decisions. Teachers are expected to use this framework to evaluate the impact of technology on learning, ensuring that digital tools are used in ways that are interactive, creative, and, where appropriate, transformative.

The use of Generative AI requires professional oversight. Teachers are responsible for ensuring that its use aligns with our AI policy and supports learning rather than replacing it. This includes setting clear expectations for pupils, modelling appropriate and ethical use, and designing tasks that promote critical thinking and maintain academic integrity.

Professional development plays a key role in supporting effective digital practice. Teachers are expected to engage in training and professional learning to deepen their understanding of digital pedagogy, including GenAI and Digital Citizenship. The College will provide ongoing support, including guidance, training, and opportunities to share effective practice across departments.

All digital practices are underpinned by robust safeguarding principles, including age-appropriate access, active supervision, data protection, and explicit teaching of safe and responsible online behaviour. If any member of staff has a safeguarding concern linked to a pupil's online activity or digital device use, this must be reported without delay to the Designated Safeguarding Lead (DSL) or a member of the Safeguarding Team, in line with school procedures.

The expectations set out in this policy form part of the College's approach to teaching and learning. They are reflected in professional dialogue, lesson observation, and review processes, and are intended to support continuous improvement in practice.

The following principles summarise the school's expectations for professional practice:

- Technology is used deliberately and with a clear purpose, guided by the PICRAT framework.
- Teachers model focused, responsible, and ethical use of technology.
- Learning tasks are designed to require active thinking and cognitive engagement.
- Teachers must maintain clear oversight of technology use, including GenAI, during device-based learning activities.
- Staff engage in ongoing professional learning and contribute to the sharing of effective practice.
- During teacher-led instruction, pupils must close laptops to ensure full attention is given to teaching and discussion.
- Headphones may be used only when explicitly directed by the teacher for a specific listening task.
- All homework must be recorded online in Teams to support pupils in managing their digital diaries effectively.
- As a guiding principle, digital and non-digital approaches should be balanced, with technology used where it demonstrably enhances learning rather than as the default. The except is when the digital device or platform is the primary point of learning (e.g. Programming in Computer Science or CAD Design in DT).

8. Evaluating Impact and Practice

The impact of this policy on teaching and learning will be evaluated as part of the school's wider approach to professional practice. The focus is on understanding how technology is used within the classroom and the extent to which it supports thinking, engagement, and learning. Evaluation

will focus on the quality of digital learning rather than the frequency of technology use. Attention will be given to whether technology supports cognitive engagement, effective feedback, and meaningful learning experiences, in line with the principles outlined in this policy.

Evidence will be drawn from a range of sources, including lesson observation, professional dialogue, pupil voice, and assessment outcomes. This evidence will inform reflection and discussion, supporting teachers in refining and developing their practice. The evaluation of digital learning is intended to be developmental. The aim is to support high-quality teaching, encourage professional reflection, and share effective practice across the school. It is not intended as a measure of compliance but as part of an ongoing improvement process.

The policy will be reviewed periodically to reflect developments in research, changes in technology, and evolving practice within the College. In particular, the rapid development of Generative AI will require ongoing consideration to ensure that its use continues to support learning, critical thinking, and academic integrity.

9. References

1. Clark, R. C., Nguyen, F., & Sweller, J. (2006). *Efficiency in learning: Evidence-based guidelines to manage cognitive load*. Pfeiffer.
2. Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*(4), 227–268. https://doi.org/10.1207/S15327965PLI1104_01
3. Deci, E. L., Koestner, R., & Ryan, R. M. (2001). Extrinsic rewards and intrinsic motivation in education: Reconsidered once again. *Review of Educational Research, 71*(1), 1–27. https://doi.org/10.3102/00346543071001001
4. Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011). From game design elements to gamefulness: Defining gamification. In *Proceedings of the 15th International Academic MindTrek Conference* (pp. 9–15). https://doi.org/10.1145/2181037.2181040
5. Education Endowment Foundation. (2023). *Using digital technology to improve learning*. https://educationendowmentfoundation.org.uk/education-evidence/guidance-reports/digital
6. Hanus, M. D., & Fox, J. (2015). Assessing the effects of gamification in the classroom: A longitudinal study on intrinsic motivation, social comparison, satisfaction, effort, and academic performance. *Computers & Education, 80*, 152–161. https://doi.org/10.1016/j.compedu.2014.08.019
7. Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. Routledge.
8. Holmes, W., Bialik, M., & Fadel, C. (2019). *Artificial intelligence in education: Promises and implications for teaching and learning*. Center for Curriculum Redesign.
9. Kasneci, E., Seßler, K., Küchemann, S., Bannert, M., Dementieva, D., Fischer, F., Gasser, U., Groh, G., Günnemann, S., Hüllermeier, E., Krusche, S., Kutyniok, G., Michaeli, T., Nerdinger, F. W., Pfeffer, J., Poquet, O., Sailer, M., Schmidt, A., Seidel, T., & Kasneci, G. (2023). ChatGPT for good? On opportunities and challenges of large language models for education. *Learning and Individual Differences, 103*, 102274. https://doi.org/10.1016/j.lindif.2023.102274
10. Kirschner, P. A., & De Bruyckere, P. (2017). The myths of the digital native and the multitasker. *Teaching and Teacher Education, 67*, 135–142. https://doi.org/10.1016/j.tate.2017.06.001
11. Kimmons, R., Graham, C. R., & West, R. E. (2020). The PICRAT model for technology integration in teacher preparation. *Contemporary Issues in Technology and Teacher Education, 20*(1), 176–198. https://citejournal.org/volume-20/issue-1-20/general/the-picrat-model-for-technology-in-teacher-preparation
12. Lo, C. K. (2023). What is the impact of ChatGPT on education? A rapid review of the literature. *Education Sciences, 13*(4), 410. https://doi.org/10.3390/educsci13040410
13. Mayer, R. E. (2021). *Multimedia learning* (3rd ed.). Cambridge University Press.
14. OECD. (2015). *Students, computers and learning: Making the connection*. OECD Publishing. https://doi.org/10.1787/9789264239555-en
15. OECD. (2021). *21st-century readers: Developing literacy skills in a digital world*. OECD Publishing. https://doi.org/10.1787/a83d84cb-en
16. OECD. (2023). *PISA 2022 results (Volume I): The state of learning and equity in education*. OECD Publishing. https://doi.org/10.1787/53f23881-en
17. Risko, E. F., & Gilbert, S. J. (2016). Cognitive offloading. *Trends in Cognitive Sciences, 20*(9), 676–688. https://doi.org/10.1016/j.tics.2016.07.002
18. Rosenshine, B. (2012). Principles of instruction: Research-based strategies that all teachers should know. *American Educator, 36*(1), 12–19, 39.
19. Sailer, M., Hense, J. U., Mayr, S. K., & Mandl, H. (2017). How gamification motivates: An experimental study of the effects of specific game design elements on psychological need satisfaction. *Computers in Human Behavior, 69*, 371–380. https://doi.org/10.1016/j.chb.2016.12.033
20. Sailer, M., & Homner, L. (2020). The gamification of learning: A meta-analysis. *Educational Psychology Review, 32*(1), 77–112. https://doi.org/10.1007/s10648-019-09498-w
21. Sweller, J., Ayres, P., & Kalyuga, S. (2011). *Cognitive load theory*. Springer.
22. UNESCO. (2023). *Guidance for generative AI in education and research*. https://www.unesco.org/en/articles/guidance-generative-ai-education-and-research

23. Van Merriënboer, J. J. G., & Kirschner, P. A. (2017). *Ten steps to complex learning: A systematic approach to four-component instructional design* (3rd ed.). Routledge. https://doi.org/10.4324/9781315113210
24. Yan, L., Sha, L., Zhao, L., Li, Y., Martinez-Maldonado, R., Chen, G., Li, X., Jin, Y., & Gašević, D. (2024). Practical and ethical challenges of large language models in education: A systematic scoping review. *British Journal of Educational Technology, 55*(1), 90–112. https://doi.org/10.1111/bjet.13370

9. Further Learning and Professional Development

1. Education Endowment Foundation. (2023). Using digital technology to improve learning. https://educationendowmentfoundation.org.uk/education-evidence/guidance-reports/digital
2. Holmes, W., Bialik, M., & Fadel, C. (2019). *Artificial intelligence in education: Promises and implications for teaching and learning*. Center for Curriculum Redesign.
3. Lo, C. K. (2023). What is the impact of ChatGPT on education? A rapid review of the literature. *Education Sciences, 13*(4), 410. https://doi.org/10.3390/educsci13040410
4. Luckin, R. (2018). *Machine learning and human intelligence: The future of education for the 21st century*. UCL Institute of Education Press
5. Luckin, R., Holmes, W., Griffiths, M., & Forcier, L. B. (2016). *Intelligence unleashed: An argument for AI in education*. Pearson.
6. Navarro-Martínez, O., & Peña-Acuña, B. (2022). Technology usage and academic performance in the PISA 2018 report. *Journal of New Approaches in Educational Research, 11*(1), 130–145. https://doi.org/10.7821/naer.2022.1.735
7. OECD. (2019). *Artificial intelligence in society*. OECD Publishing. https://doi.org/10.1787/eedfee77-en
8. Selwyn, N. (2019). *Should robots replace teachers? AI and the future of education*. Polity Press.
9. Selwyn, N. (2021). *Education and technology: Key issues and debates* (2nd ed.). Bloomsbury Academic.
10. Van Merriënboer, J. J. G., & Kirschner, P. A. (2017). *Ten steps to complex learning: A systematic approach to four-component instructional design* (3rd ed.). Routledge. https://doi.org/10.4324/9781315113210
11. Yan, L., Sha, L., Zhao, L., Li, Y., Martinez-Maldonado, R., Chen, G., Li, X., Jin, Y., & Gašević, D. (2024). Practical and ethical challenges of large language models in education: A systematic scoping review. *British Journal of Educational Technology, 55*(1), 90–112. https://doi.org/10.1111/bjet.13370

10. Related Documents

1. Brighton College (Singapore). (2026). *Acceptable Use of Technology Policy (Senior School)*
2. Brighton College (Singapore). (2026). *Academic Integrity Policy*.
3. Brighton College (Singapore). (2026). *Digital strategy 2026–2029*.
4. Brighton College (Singapore). (2026). *Generative AI guidance for pupils*.
5. Brighton College (Singapore). (2026). *Generative AI guidance for staff*.
6. Cognita. (2024). *Artificial intelligence policy*. Cognita.
7. Cognita. (2024). *Digital Learning Policy*. Cognita.
8. Cognita Asia. (2024). *Regional Digital Learning Policy*. Cognita Asia.