

Developing learners as independent thinkers

Executive summary

Developing learners' ability to think independently, critically and creatively is central to the Curriculum for Wales and vital in helping young people become ambitious, capable learners. The most effective providers placed independent thinking at the heart of a broad and purposeful curriculum, supported by clear leadership, skilful teaching and coherent planning. In these settings, teachers modelled their own thinking, used open-ended questioning, and created safe, inclusive environments where learners were encouraged to take risks, explore ideas and reflect on their progress. Carefully planned scaffolding and well-organised learning spaces promoted autonomy, collaboration and resilience. These providers gave due attention to the four purposes of the Curriculum for Wales. In the strongest practice, these were integrated holistically across learning rather than treated as additional or separate elements.

However, practice was inconsistent across sectors. In less effective settings, teaching focused too heavily on correct answers or procedural shortcuts, limiting deeper understanding. Over-direction, curriculum overload and an emphasis on exam preparation often constrained opportunities for reflection and inquiry. Sustained improvement depended on strong leadership, reflective professional learning and a shared understanding of how to nurture independence across all phases. The most successful providers struck a balance between appropriate support and the freedom for learners to think, question and make decisions for themselves.

Introduction

Developing learners' ability to think independently, critically and creatively lies at the heart of education. It underpins the Curriculum for Wales and reflects one of its core purposes: 'to enable young people to become ambitious, capable learners who are ready to learn throughout their lives'.

Thinking is not a skill to be taught in isolation, rather it must be nurtured across all areas of learning and experience. Learners need regular opportunities to question, reason, reflect and make considered choices. They also need time and space to explore ideas, take risks, and develop resilience in the face of challenge. Across the range of providers we inspected, there was a high degree of variability in how learners developed as independent thinkers. In the majority of cases, teaching supported learners to take increasing ownership of their learning, consider their own thinking, and engage more confidently with challenging ideas. Staff understood how to promote critical thinking through thoughtfully designed activities and supportive environments. However, too often, teachers promoted shortcuts that allowed learners to get the right answer but did not develop their understanding. Our thematic report on the teaching of mathematics highlighted this where teachers 'often taught **procedural shortcuts** rather than helping pupils understand mathematical concepts and make connections between topics' (Estyn, 2025a).

The most effective providers placed independent thinking at the heart of a broad and ambitious curriculum. Leaders articulated a clear, shared vision for developing learners' thinking and ensured that this was reflected consistently in classroom practice. Staff ensured that learners developed secure foundational knowledge before encouraging them to question, manipulate, or apply it in more complex ways. Teachers modelled how to think, gradually introduced more abstract tasks, and provided scaffolds that were reduced over time. These providers nurtured a culture of curiosity and risk-taking. Teaching was characterised by challenge, collaboration, and skilful questioning that deepened understanding.

Across sectors, we observed a wide range of strategies to develop learners' thinking. While many of these were effective, no single approach was universally successful. The effectiveness of each method depended on careful planning, appropriate challenge, and a secure understanding of progression in thinking skills. There are many useful examples of how schools develop thinking skills in our recent thematic report, '[Teaching the Curriculum for Wales](#)' (Estyn, 2025).

Strategies for effective classroom practice

The most effective classrooms were characterised by coherent approaches underpinned by a shared vision for developing thinking. Leaders used self-evaluation effectively to monitor the impact of teaching strategies and involved staff in refining practice.

Effective practitioners planned purposeful, often challenging open-ended tasks that encouraged learners to make decisions, explore ideas, and solve problems independently. They scaffolded thoughtfully at the outset and then stepped back to allow space for learners to think. In less effective cases, staff intervened too quickly or over-scaffolded tasks, limiting opportunities for deeper thinking.

Well-organised learning environments supported independence by giving learners access to suitable resources, enabling them to choose how and where to complete work. In these classrooms, learners took greater ownership of their learning.

Teachers created safe spaces where learners felt secure in taking intellectual risks. They built learners' resilience by encouraging perseverance in the face of challenge. Inclusive strategies helped reluctant learners to participate, building confidence in independent thinking and communication.

In a few cases, collaborative learning was used well to promote independence. Learners discussed ideas, evaluated options and supported each other through challenges. In these lessons, teachers promoted learner voice through co-constructed success criteria, negotiated enquiry questions, or flexible task design. These approaches built self-regulation and a clearer understanding of progress.

The most effective teachers modelled independent thinking strategies clearly. They verbalised their own thought processes, helped learners reflect on their strategies and encouraged them to review and refine their work. Where practice was weaker, learners had fewer opportunities to reflect, relied heavily on adult input and lacked the confidence to manage their learning.

Questioning

There was a high degree of variability in teachers' use of questioning to promote pupils' thinking. In the most successful practice, teachers used a broad range of question types, carefully matched to purpose, to promote independent thinking and deepen understanding. They used questioning and

feedback not simply to assess knowledge, but to encourage reflection and extend learning. Effective questioning enabled learners to retrieve and consolidate prior learning, clarify and check understanding, extend their subject knowledge, explore ideas and challenge assumptions.

As pupils developed, teachers used open-ended questions to prompt learners to consider abstract or ethical concepts. This approach helped learners to articulate their thinking more clearly and reason more deeply. As learners move into secondary schools, a minority of teachers used diagnostic questioning skilfully to identify learners' misconceptions. Carefully crafted multiple-choice questions, designed to expose common errors, allowed teachers to pinpoint gaps in understanding. When followed by probing questions, clear explanations or guided discussion, this approach encouraged learners to think more carefully, reflect on their responses, and refine their reasoning.

Where questioning was less effective, teachers relied too heavily on closed questions and did not build on learners' responses. As a result, learners gave brief, underdeveloped answers and did not develop their confidence in explaining or developing their ideas.

Metacognition

In a few providers, teachers helped learners develop greater awareness of how they think. In these instances, teachers used structured approaches to support metacognition¹. Metacognition is the ability to reflect on and manage one's own thinking. It means being aware of how you learn, considering the strategies you use, and making choices to improve your learning and included elements of surprise or challenge for learners. These strategies were most effective when followed by opportunities for learners to apply and reflect on what worked and why.

Graphic organisers

Visual tools such as Venn diagrams and flowcharts helped learners organise and connect ideas, particularly in the humanities and health and well-being areas of learning and experience. However, when used repetitively or without clear modelling, their impact diminished.

Supporting independence through problem-based learning

Many primary schools offered learners stimulating opportunities to develop independence through solving problems. In the most effective practice, learners planned their approach, monitored progress, and reflected critically on outcomes. Over time, they became more confident in choosing strategies, justifying reasoning, and evaluating alternatives. These approaches supported creative problem-solving and teamwork when grounded in prior knowledge and clear expectations. However, as pupils moved into secondary schools, these opportunities diminished.

In a few cases in secondary schools, teachers designed tasks that promoted critical thinking across areas of learning and experience, enabling learners to apply their skills in new contexts. In these cases, cross-curricular projects successfully supported curiosity and collaboration. However, thematic approaches often led to superficial coverage of content, with tasks planned to tick cross-curricular boxes rather than deepen understanding. In these cases, activities lacked the necessary depth or rigour and did not provide sufficient opportunities for learners to revisit or build on prior learning. As a result, learners struggled to make meaningful connections or develop their independence.

Spotlight on practice: Gowerton Primary School

A culture of independent learning

Gowerton Primary has established robust processes to promote learners' independence from an early age. Staff plan purposeful activities, particularly in literacy and numeracy, that enable learners to choose their own approaches. The communal 'learning street' is used well to create purposeful opportunities for learners to think and work independently. As a result, most learners develop as resilient, reflective individuals who use a range of strategies to solve problems, collaborate effectively, and take ownership of their learning.

Laying the foundations in the early years

Many non-maintained nursery settings and early years providers supported children well to develop as independent thinkers. In the most effective practice, children engaged enthusiastically in rich learning environments, made choices confidently, and followed their interests. Practitioners used open-ended questioning and responded well to children's ideas in play, sustaining engagement and promoting creative thinking. A balance between adult-led and child-initiated learning promoted resilience and curiosity. Activities such as cooking, outdoor discovery, and construction provided worthwhile opportunities for children to think independently.

Accessible resources and well-organised environments encouraged children to take initiative. Assessment was generally used effectively to inform next steps, although in a few settings, adult direction remained too dominant and limited children's exploration.

Spotlight on practice: Pengelli Primary School

Developing younger learners as independent thinkers

At Pengelli Primary, teachers and support staff use thoughtful questioning, careful observation and well-timed interventions to extend learners' thinking. From an early age, most learners reflect on their learning and relate it to experiences beyond the classroom. For example, in Reception, learners designed an investigation to test who was strongest, using chalk and wooden tools to collect evidence. These purposeful tasks help learners to develop confidence, curiosity, and independent thinking.

Supporting groups of learners

Learners who are adversely affected by poverty and disadvantage were generally supported well through purposeful learning experiences. Most learners with English or Welsh as an additional language received effective support to develop language and engage meaningfully. Strategies such as modelling, visuals, and peer talk helped these learners express and develop ideas.

More able learners were challenged through open-ended inquiry and complex tasks that encouraged them to ask questions, consider alternative perspectives, and work creatively. Where provision was weaker, this group of learners were simply given more of the same kind of work.

Many providers supported learners with additional learning needs and other specific groups effectively. Personalised approaches, often linked to individual development plan (IDP) targets, helped learners to develop confidence and skills over time. Staff provided clear routines and gradually reduced support, enabling learners to work with greater independence. However, in a minority of cases, staff intervened too quickly, limiting opportunities for learners to think for themselves.

Challenges to developing independent thinkers

In a minority of providers, the progress pupils made in developing their independent thinking was limited. In these cases, inspection recommendations often related to shortcomings in curriculum planning and weaknesses in the quality of questioning. In a few instances, the curriculum included too few opportunities for pupils to explore, question, or apply their knowledge creatively.

Over-direction from staff also contributed to this issue, with teachers sometimes providing overly prescriptive instructions or stepping in too quickly to guide pupils to the 'right' answer. This approach undermined learners' confidence and reduced their willingness to take risks, experiment with ideas, or learn from mistakes.

As learners progressed into secondary schools, systemic pressures often acted as a barrier. A strong focus on preparation for high-stakes assessments meant that teachers prioritised coverage of content and rehearsal of examination techniques over the development of deeper thinking. This resulted in a narrow interpretation of success and left little room for pupils to engage in sustained inquiry or to pursue their own lines of thought. Curriculum overload was also a factor, with dense schemes of work and time constraints limiting the scope for extended discussion. In these contexts, the emphasis on pace and coverage often came at the expense of reflection and metacognition.

Leadership and professional learning

In the most effective schools and settings, leaders placed strong emphasis on professional learning to enhance learners' independence. They set out a clear strategic vision and promoted autonomy through rich curriculum experiences and high-quality teaching. Leaders adapted their approaches in response to emerging evidence, ensuring that provision remained responsive to learners' needs.

Concluding reflections

Developing independent thinking is essential in helping learners become ambitious, capable individuals. The most effective providers articulated a clear strategic vision and implemented consistent, whole-provider approaches that promote autonomy, reflection, and purposeful learning.

Where provision was weaker, learners had fewer opportunities to work independently due to curriculum gaps, inconsistent expectations, or excessive scaffolding. Sustained improvement depends on strategic leadership, reflective practice, and a shared understanding of how independence develops across phases and settings.

Above all, the most effective providers strike a balance between appropriate support and the space

for learners to think, explore, and make decisions for themselves.

Questions for self-reflection

- To what extent do our curriculum and teaching approaches promote independence, curiosity and critical thinking across the curriculum?
- How well do we support learners with ALN, English or Welsh as an additional language, and more able learners to develop as independent thinkers?
- Are learners regularly given purposeful opportunities to make choices and reflect on their progress?
- Do our questioning and feedback strategies consistently challenge learners to think deeply and independently?
- How effectively do our classroom environments and routines support autonomy and self-regulation?
- Do staff share a common understanding of what independent thinking looks like at different ages and stages?
- How well do our assessment and evaluation processes capture progress in independent thinking?
- How involved are learners in shaping learning, reviewing their progress and contributing to providers' self-evaluation?
- Are there areas where we unintentionally limit independence through over-scaffolding or inconsistent expectations?
- How do we evaluate the impact of professional learning on teaching strategies that support independent thinking?
- Is there a clear strategic vision for developing independence? How well is it reflected in daily practice?
- What are our next steps for embedding a culture of independence and reflective thinking across the setting?

References

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Additional reading

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