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Report following the analysis and evaluation of evidence submitted by Penbridge Infant & Nursery School for the purpose of accreditation as a Thinking School by Thinking Schools @Exeter, University of Exeter.

Starting point: the school context

Penbridge Infant & Nursery School (Penbridge) is a popular and successful average sized infant school (212 on roll), and part of the Thinking Schools Academy Trust (TSAT), comprised of 20 schools (11 primary and 9 secondary). The school has a clear curriculum intent and vision outlining its beliefs and how to achieve them. The overarching focus is on lifelong learning and holistic growth for all pupils regardless of starting points. There is a clear drive to equip all children to become curious confident learners and Penbridge has fully embedded thinking in how all children learn. The topic-based curriculum provides an exceptional vehicle to nurture a lifelong love of learning and the 'Aim High' philosophy means that all children get the opportunity to demonstrate their learning through innovative 'Prove It' sessions. Penbridge is research-informed and developments such as metamemory sit alongside other metacognitive aspects in a wonderfully integrated and complimentary pedagogic approach. Typically, pupils begin school with lower-than-average starting points (particularly communication and physical skills) but make rapid and sustained progress over time. 28% of pupils are disadvantaged and the school serves an above average deprivation profile area. Penbridge was judged 'Good' in all areas by Ofsted in September 2022 and behaviour along with safeguarding are noticeable strengths of the school. Attendance is above average and indicates that the school is an attractive place to come and learn. Penbridge's curriculum is clearly mapped and underpinned by research that embraces knowledge / skills, deliberate and learning habits (via Penbridge Powers), memory and schema development, and thinking tools. The TSAT 7 Principles of Teaching align well with this and includes:

- Subject Knowledge
- Explanations
- Questioning and Responding
- Feedback to Feedforward
- Modelling
- Metacognition
- Meta-memory

Together this acts to operationalise the school's mission and include the recognition of close links between emotional wellbeing and academic achievement, encouragement of ambition, curiosity, positivity and resilience and parental engagement.¹

Pupil progression through phases has high priority Penbridge. The school's Thinking School journey started in earnest in 2018 when it joined TSAT and since then, Penbridge has gone from strength to strength with its work surrounding metacognitive development. A number of foci have been skilfully introduced and embedded. Of particular note is the effective development of Knowledge Banks that set out key vocabulary, illustrations, key facts and assumed starting knowledge. The Rainbow Fish Centre provides specialist provision for children with complex cognitive and learning difficulties. This is illustrative of the school's commitment to foster deep thinking for all pupils.²

Penbridge has a highly effective and well led Drive Team. A significant factor underpinning the high impact of the Drive Team is the full support provided by the Executive Headteacher, Head of School, SLT, Trust Thinking Lead and the Thinking Skills Co-ordinator. Active Governor support is also prominent in the development process. The Drive Team includes key members of the Teaching and Support Staff, and the team are instrumental in evaluating impact, supporting colleagues and leading CPD. These factors combine to create consistency of approaches via clear and collaborative leadership.³

¹ Reflective Proforma, School's Website, Evidence Links

² Ibid

³ Ibid

Pupils at Penbridge have an history of excellent pupil progress. This is extremely impressive given the high percentage of pupils beginning school with lower-than-average starting points. The school is relentless in pursuing high standards of achievement. However, it is lifelong holistic learning that is placed at the core of the educational provision at the school and not just the end result. Subject specific learning sits alongside wider dimensions such as the development of psychological wellbeing and dispositional growth. Underpinning this provision is a fully inclusive pastoral care entitlement embracing children, parents, staff and the community.⁴

Evidence Base

Thinking Schools @Exeter received the school's submission for accreditation from Colin Rudgley (Thinking Skills Coordinator/Project Leader) evidencing the history of the school's cognitive education development journey and the work that the school had undertaken stemming back to its origin and also specifically since 2018 when the focus moved towards Thinking Schools and embedding metacognitive strategies for learning. The evidence for accreditation is skilfully woven into the reflective proforma and includes links to a comprehensive evidence bundle together with website links, all of which are clearly linked to the 15 criteria and accreditation rubric. This structure is consistently applied across the TSAT family of schools and is a particular strength, providing consistency without undermining the specific contexts of the individual schools. The evidence on the school's website includes an overall development structure astutely linked to the 7 Principles. In addition, the school's thinking approach is illustrated by a clear and organic thinking action plan (SIP) that outlines how specific tools, principles and structures feed into the school's development journey. Within each of these domains there is ample explanatory information and exemplar materials linked to the school's curriculum policy and development planning.

Thinking School Ethos and Culture

From the evidence presented, it is clear that Thinking Skills are embedded within the culture of Penbridge. Curriculum policy documents and plans clearly map out a thinking strategy that subsequently feed into teaching strategies, and so moves thinking approaches from policy to

⁴ School's Website, Reflective Proforma and Evidence Links.

practice. Pivotal to this is the high premium placed on sharing of best practice across the school to include all staff.⁵

Penbridge has a prominent and visible thinking culture and this is due to the excellent organisational structure and visual presentation. Regular newsletters to parents ensure that the thinking partnership between the school and parents is strong. Further communication avenues include a dedicated parent section on the school's website, parents' evenings and annual reports. Indeed, parents are invited to the innovative topic outcome sessions to actually see what their child has learned. The high premium placed on celebration assemblies and displays further strengthen the Thinking School ethos and culture. Of particular note is the highly impressive Ofsted parental feedback where 100% of parents say that they would recommend the Penbridge to another parent. As a consequence of these actions, the whole learning community is equipped to support children's learning.⁶

Penbridge has forged a number of partnerships underpinned by a Thinking Schools focus. The outstanding cross-trust collaboration enables best practice to permeate throughout the member schools and also more widely. Communications with the community are two way via outreach activities and an open-door policy where visits to the school are actively encouraged so that visitors can see how the thinking vision works in action. Through its connections with these stakeholders, Penbridge conveys a positive, caring and creative atmosphere, demonstrating that careful thought has been put into its organisational structure and visual presentation. This is clearly evidenced.⁷

Senior Management and Whole School Commitment

The Executive Headteacher, Head of School and Thinking Schools Coordinator are high profile and give full commitment to both the Thinking School ethos and the implementation of the cognitive development agenda. This has cascaded to leadership throughout the school and

⁵ Ibid

⁶ Ibid

⁷ Ibid

the strong senior leadership structure stands as a model of excellent practice. The collaborative and integrated leadership model also includes the TSAT Thinking Lead.⁸

The Governing Body are not only fully supportive of the school's commitment to cognitive education, but also demonstrate a good understanding of how this approach enables children to think through their curriculum in order to bring learning to life. Governors are kept up to date about the school's approaches to cognitive education, particularly through school visits where thinking skills are seen in action.⁹

The Drive Team is comprised of a rich blend of staff and is very well structured and led. Communication is excellent as are planning processes including meetings and subsequent developmental actions. The introduction of the Be Your Best Self (BYBS) journal process is an excellent and innovative development and has clearly done much to bring the voice of the pupils into the school's development journey. Together, these aspects ensure that there is continued dialogue about Thinking Skills so that specific areas of development can be identified and acted upon.¹⁰

There is ample evidence to indicate that Penbridge is receptive to change and innovation. The topic-based curriculum provides engaging opportunities for children to actively engage in their own learning and the 'Prove It' sessions add a wonderful dimension to this. The development of cognitive approaches has been part of the school's vision and drive for improvement for a number of years in response to ensuring that the school had an explicit vision based upon inclusive educational values that would serve as the foundation for a strategic move forward.¹¹ A range of ways of scaffolding effective thinking and learning skills have been incorporated into all aspects of the school as appropriate spanning visual tools, thinking dispositions, and retrieval practice.¹²

⁸ Ibid

⁹ Ibid

¹⁰ Ibid

¹¹ Ibid

¹² Ibid

There is a specific Thinking Action Plan designed to secure the wide-spread use of thinking tools across the school. The range of cognitive developments indicates that plans are aspirational and designed to empower children to progressively take ownership of their cognitive development.¹³ Also, plans and CPD provision dovetail well and provide a clear mechanism for ongoing development.

Learning and Teaching

It is clear, from the documentation provided, that Thinking Skills are embedded within the culture of Penbridge. Thinking Hats and Thinking Maps are used as an integral reflective process throughout the school via the BYBS journal approach. Of particular note is the way Penbridge carefully select and adapt thinking tools and approaches to fully meet the specific needs of children. Indeed, the 'Penbridge Powers' provide an innovative dispositional focus. Planning and reflective development meetings provide an effective springboard for action in order that all lessons include thinking skills. For example, Thinking Maps, Thinking Hats and Thinking Keys are fully embedded to also include a shared and common language for learning. Excellent support and resources ensure that staff and pupils develop thinking approaches effectively and in close alignment with learning and teaching. This is largely due to a 'keep it simple and clear' approach. In this regard, the BYBS reflections focus on what works best, for whom and how. This, aligned to excellent leadership and communication, ensures that good practice is shared judiciously with all staff to develop their classroom impact. There is a universal staff belief in the importance of taking a whole school approach to the teaching of thinking and that all pupils are capable of making progress. This further supports the school's commitment to cognitive education. This clearly demonstrates how it is one of the school's main aims.¹⁴

The school's pedagogical approach is informed by ongoing CPD which has the 7 Principles of Teaching at its core. Specific research-informed elements include neuroscience, neuroplasticity, Growth Mindset, metacognition, memory and schema development, motivation and feedback as its foundation. This sound research evidence base has allowed

¹³ Reflective Proforma School Website and Evidence Links

¹⁴ Ibid

learning and teaching to move forward with purpose, coherence and impact. The emphasis placed on the learning environment is also clearly illustrated in the evidence provided by the school. These elements, combined with Penbridge's commitment to the development of psychological well-being, have resulted in learning and teaching that is focused on the holistic development of every child.¹⁵

Recent learning and teaching developments have included the inclusion of retrieval practice and cognitive load elements. The aim is to develop a learning approach where higher order thinking qualities are not only nurtured but are also given the practical opportunities to flourish. Effective use of displays enriches the learning environment by encouraging a common language for learning and fostering self-regulation of thinking and learning. Of particular note is the interactive quality of displays where children are encouraged to interact with the content by selecting a particular focus for their learning. Where feasible, the school has personalised and contextualised visual displays to aid consistency, recognition and application of Thinking Skills. Children are encouraged to strive for high standards through displays of high-quality pieces of work. Penbridge has clear evidence of developing learning and teaching and the appreciation of elements such as cognitive load has shifted practice from a teaching approach to a pedagogical culture.¹⁶

Training

The Drive Team and Leadership Team are well versed in the theory, application and assessment of cognitive education and psychological well-being. They have undoubtedly influenced the focus on establishing a common thinking language and approach across the curriculum.¹⁷ There is an ongoing and differentiated training programme in place, aimed at the development of expertise in a range of cognitive tools, strategies and resources for established and newly appointed staff. This includes the opportunity to be recognised as a Chartered Teacher. The wider link with TSAT has enabled the school to extend its CPD provision and specific training on retrieval practice, meta-memory and cognitive load has clearly impacted well on the progress of pupils. In 2021, the school moved its CPD focus to a

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¹⁶ Ibid

¹⁷ Reflective Proforma, School Website and Evidence Links

'Professional Growth' model in order to keep the development foci 'live'. This has involved the use of the 'Think Ahead' digital platform to further allow staff to check fortnightly on their own development and also provide positive feedback to colleagues. This has clearly done much to strengthen the cohesion of the staff body. BYBS staff meetings further add to a reflective practitioner approach.

There is an organic cycle of lesson study in place that centres on key elements so that emerging development needs can be met. A recent focus on peer and self-assessment has been highly effective in this regard. CPD dovetails well with the overarching 'Six Starting Points' and the 'Thinking Pathways' integral to the TSAT vision and model. There is ample provision for staff to trial and extend approaches to the teaching of thinking. Parents are fully informed of the Thinking Schools ethos, which features prominently on the website and in the school's communications. Staff are encouraged to work collaboratively across the trust and to provide mutual support through the development of thinking generally and also through particular foci. Good practice is shared widely, and lesson observations are used extensively to evaluate and share good practice in a climate of mutual support. The inclusion of the 24/7 employee assistance programme is illustrative of the high premium Penbridge places on the wider well-being of its staff. As a result, staff are highly supportive of leaders. Moving forward, CPD would benefit from the further extension of a practitioner research to embrace the SPARE model of evaluative action research and the Leadership and Drive Team are well placed to lead on this aspect.¹⁸

Assessment and Outcomes

Alternative and complimentary forms of assessment spanning the formative, summative and ipsative domains are routinely used to examine the development of cognitive skills, and how these are related to learning outcomes in the wider sense have been implemented. The MALS has been wonderfully integrated into the BYBS process and appears as a distinct element within the reflective journal. Children make exceptional progress given that many enter the school with very low starting outcomes. Assessments, including attendance and behaviour, indicate largely high cognitive and self-perception development. Indeed, both attendance and

¹⁸ Ibid

behaviour are exemplary with only two fixed-term exclusions in the last three years. Outcomes at the end of KS1 indicate that pupils are well prepared for the next stage of learning. The further development of the BYBS journal will undoubtedly add to this rich source of feedback by placing pupils at the heart of their self-regulatory learning. A future development area may well include the use of baseline and subsequent growth indicators via both quantitative and qualitative data sources. Penbridge demonstrates a healthy 'data informed' (rather than data led) approach to assessment to avoid assessment becoming the master of the curriculum rather than the servant.¹⁹

The school is clear that the focus on cognitive development through a whole school consistent approach to learning has improved children's attitudes, improved their enjoyment, developed their independence, contributed to high quality teaching and led to better pupil progress.²⁰ There is much evidence about how the development of learning behaviours are associated with positive outcomes for pupils and are associated with improved motivation.

The excellent pupil progress results indicate impressive achievement growth. The school's own internal analysis and presentation of these outcomes reflect a positive achievement trend and demonstrates transparency and aspiration for further improvement.²¹

Evaluation of Programmes

There is a continual review of the range of cognitive tools, strategies and resources employed, with specific reference to their impact on pupils' meta-cognition and the transfer of skills, strategies and learning behaviours. This makes use of the SPARE wheel model of illuminative evaluation on which the Thinking School approach is based. The SPARE model would benefit from wider dissemination at all levels (from leadership to individual teachers) in order to further foster a 'researching professional' culture. The SPARE model can be easily aligned to the Ofsted curriculum focus on Intent, Implementation, and Impact areas. Through a collaborative approach to leadership, the Leadership and Drive Team have established a culture of thinking and school improvement built on regular opportunities for staff to discuss

¹⁹ Ibid

²⁰ Reflective Pro-forma, School Website and Evidence Links

²¹ Ibid

the process and efficacy of cognitive education and how it can be maintained and improved. There is a genuine feel that 'this is the way we do things around here'.

Year Leaders take part in weekly monitoring activities and lesson observations are conducted by SLT half-termly for NQTs and termly for more experienced teachers. Termly reflections, using Thinking Hats, on thinking and learning by all teaching staff ensure that self-evaluation flourishes. Formal evaluations of thinking developments are undertaken by members of the Drive Team who also conduct book monitoring in order to further evaluate the clarity of children's thinking. Evaluations are fed back to teachers, and also Governors, in order to further strengthen the collaborative development approach of the school. Learning walks take place once per half-term and the Drive Team regularly update displays in order to keep the current thinking foci alive. The Thinking Lead captures evaluations in a termly report and excellent QA is provided by the TSAT Thinking Lead. This feeds into both the SEF and SIP such that the process is organic, collaborative and ongoing.

Ownership

There is no doubt that Penbridge has made a full commitment to developing and embedding cognitive education throughout the school. From the initial introduction of cognitive tools and practices, the school has carefully and judiciously expanded their repertoire of cognitive pedagogy. There is evidence that the school is beginning to distil and integrate these practices both in how they are used together and in the way they have become part of the thinking culture throughout the school and across roles and ages. Through the careful and progressive introduction of cognitive tools and CPD geared towards developing teachers as skilled mediators of learning, linked to the school's vision and values, the school has laid a strong foundation that ensures the whole school approach to the teaching of thinking flourishes. The BYBS Journal together with the 7 Principles of Teaching and Learning are outstanding in terms of providing a consistent vehicle for continuous whole school metacognitive development. The 'Penbridge Powers' initiative is also highly effective by way of supporting children's learning and dispositional development. Together, these combine to effectively promote the educational growth of all children by providing them with ownership over their own development and fostering self-regulatory learning.

Penbridge is a truly transformational and inspirational educational community. It has carefully developed and nurtured its core values so that they permeate throughout the entire school and beyond. Staff and children think deeply about what they do, and levels of collaboration are exceptional. Penbridge places a high premium on being research informed in terms of their ongoing development. When combined with the school's unwavering commitment to maximising the learning potential of all children this positions Penbridge in the top-flight of education providers. As a result of this high-quality educational provision, all children achieve the highest holistic standards, and the rates of progress are exceptional. This has not been at the expense of psychological well-being and the school community interact such that this element flourishes in close alignment with learning and teaching.

Conclusion

The range of evidence submitted undoubtedly indicates that Penbridge Infant & Nursery School meets the criteria set by Thinking Schools @Exeter as a Thinking School and demonstrates a true commitment to the continued development of a whole school approach to the teaching of thinking. I therefore recommend that accreditation be awarded until February 2026.

I would like to thank the school for the clear and judicious evidence base, clearly organised around the evaluation rubric, that provided the lens through which the excellent practice could be viewed. It has been a pleasure to undertake this evaluation.

Further Recommendations

I conclude my evaluation with some suggestions as to how the school could continue to develop as a Thinking School to inform a development visit to aid action planning. This might include:

- Further develop and maintain staff development through ongoing external and internal training geared towards rationalising what works best by fine-tuning the already best practice. This combination of training will secure a balance of internal self-improvement with an external freshness and perspective. This requires getting

underneath cognitive tools and dispositional development to identify the underlying meta-cognitive processes that enhance children's learning and thinking.

- Further integrate thinking processes with questioning, visual tools, dispositional development, deliberate practice routines (geared towards further developing Growth Mindset), assessment of process, assessment of product, evaluation of process and evaluation of product. This could take the form of an overview for how these elements are integrated. This would enable teachers and leaders to have a clear overview of metacognitive development as a whole.
- Further extend lesson observations to include key indicators of learning and thinking processes. These need to be simple, clearly observable and made explicit to all staff. The work of Project Zero (Harvard University) is a particularly useful source in this respect. These indicators of thinking development can be utilised both formatively (ideally in 'real time') in order for teachers to provide feedback at the point of need, and summatively so that teachers and leaders can monitor and evaluate impact.
- Add the internal use of effect sizes at an individual teacher, team and whole school level to further strengthen the quantitative robustness of data in order to supplement high quality qualitative data. This will allow impact comparisons of meta-cognitive strategies and feedback with the work of The Sutton Trust and John Hattie. The key evaluative questions are 'What works best?', 'For whom?' and 'How?'. A multi-method approach to data may serve to get to the heart of these questions and focus group interviews are particularly effective in generating efficient data to supplement outcome and survey data.
- Move from evaluation to evaluative research to further foster the development of staff as researching professionals. Shift 1 is to move from a self-evaluation processes that produce objectives to ones that generate research questions of the style 'How can we/I improve...?'. Shift 2 is to ensure that all staff sustain the 'open door' philosophy and remain open to evaluating their own impact in an honest and self-critical way. Shift 3 means providing opportunities for best practice impact to be made public. To gain accreditation as an Advanced Thinking School, researching professionals are expected to offer articles relating to best practice to publications such as the school's magazine, local newspapers, the school website and professional

publications. Other forums where impact can be made public are leader/teacher learning communities and action research seminars. The SPARE model of evaluative action research is a useful framework through which to apply evaluative research at all levels of leadership and classroom practice and could easily be applied to the Intent, Implementation and Impact approach to curriculum development (Ofsted) given the alignment of PAR to Intent, Implementation and Impact. The addition of the Setting (S) and Evaluation (E) would enhance current practice without having to re-invent it.

- Consider how to further involve children in the leadership of metacognitive developments.
- Use the criteria of an Advanced Thinking School to frame future developments, in order to deepen and extend the understanding and expertise of Penbridge. In particular, the extension of practitioner research through wider dissemination of the SPARE model of illuminative evaluation may provide a vehicle for further contextualising cognitive approaches to find out what works best, for whom and how.



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On behalf of Dr Judith Kleine-Staarman, Director of Thinking Schools @Exeter

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