



School of Education  
Faculty of Humanities, Arts and Social Sciences  
St Luke's Campus  
EXETER EX11TE  
UK

Email [thinkingschools@exeter.ac.uk](mailto:thinkingschools@exeter.ac.uk)  
Web <https://education.exeter.ac.uk/>

**Report following the analysis and evaluation of evidence submitted by Discovery Nursery School for the purpose of accreditation as a Thinking School by Thinking Schools @Exeter, School of Education, University of Exeter UK.**

### **Starting point: the school context**

Discovery Nursery School (DNS) is a popular and successful nursery school catering for 150 children between the ages of 1.5 and 5. The school has the overarching mission of enabling all children to become holistic lifelong learners. Clear aims act to operationalise this mission and include the recognition of close links between emotional wellbeing and learning, encouragement of curiosity, positivity resilience, cooperation and teamwork.<sup>1</sup>

Pupil progression through phases has high priority at DNS and its innovative thinking-based curriculum is carefully mapped out to achieve this. Full inclusion ensures that all children get the very best opportunities to develop their metacognitive skills alongside wider educational development. The school's Thinking School journey started in earnest in 2020 in response to an observed need to provide all children with the metacognitive skills and dispositions so that they could better meet the challenges that an ever-changing world presents. DNS saw an opportunity to develop a common language for learning by taking a whole school approach to the teaching of thinking and the school has progressively embedded a range of metacognitive tools and processes.<sup>2</sup>

As a small school, DNS has a small Drive Team that has been pivotal to the school's development as a Thinking School. As a result of a sustained and progressive approach to the teaching of thinking, children at DNS achieve well. However, it is lifelong learning that is placed at the core of the educational provision at the school. Learning sits alongside

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<sup>1</sup> Reflective proforma

<sup>2</sup> Ibid

additional dimensions such as social, emotional, physical and psychological wellbeing. Underpinning this provision is an inclusive child-centred provision embracing children, parents, staff and the community.<sup>3</sup>

### **Evidence Base**

Thinking Schools @Exeter received the school's submission for in the form of a reflective proforma evidencing the history of the school's metacognitive education development journey and the work that the school had undertaken stemming back to the beginning of its focus towards Thinking Schools. The evidence for accreditation is skilfully woven into the reflective proforma and includes digital links, all of which are clearly linked to the 15 criteria. DNS has an overall development structure referencing four core elements: Thinking Keys, Optical Frames, Habits of Mind, and Philosophy for Children (P4C). 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 DNS. 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 practice. Pivotal to this is the high premium placed on sharing of best practice across the school to include all staff.<sup>4</sup>

The school provides parents with clear and helpful information relating to the thinking curriculum through newsletters, presentations and school website. Indeed, parents are fully involved in the thinking curriculum via a range of events such as International Day, Donation Day, Mothers' Day, Book Fairs and the End of Year Party. All of these events have a focus on the development of thinking and metacognition. Curriculum information is shared with parents and includes educational aims, methodological information and follow up ideas for parents to use at home. Parental feedback indicates a particular appreciation of the use of

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<sup>3</sup> Ibid

<sup>4</sup> Digital drive evidence

thinking tools and their impact on developing learning. As a consequence of these actions, parents are well equipped to support their children's learning at home.<sup>5</sup>

DNS has forged a number of partnerships underpinned by a Thinking Schools focus in order to champion the Thinking Schools approach. The school places a high premium on community service and takes a lead role in aspects such as training student teachers and educational exhibitions. This involvement incorporates a rich variety of technical and methodological elements. In addition, DNS widely circulates information relating to thinking developments and associated pedagogy. As a result of sharing these experiences widely, DNS demonstrate that they are key educational players in their locality.<sup>6</sup> Through its connections with these stakeholders, DNS conveys a positive, caring and creative atmosphere, demonstrating that careful thought has been put into its organisational structure and visual presentation.<sup>7</sup>

### **Senior Management and Whole School Commitment**

The headteacher has made a formal commitment to cognitive education as part of the school's development priorities and communications within the school and more widely. This is evidenced in school improvement planning documentations, booklets and displays celebrating thinking skills, school prospectus and also headteacher reports. This commitment, alongside the leadership provided by other core leaders, has galvanised the school's development.<sup>8</sup>

The Drive Team is comprised of a small but rich blend of dedicated staff. In addition, the school has fostered an ongoing formative dialogue between pupils and teachers with a particular focus on Thinking Keys, Optical Frames, Habits of Mind, and Philosophy for Children. The aim is to refine practice so that thinking tools have increased impact on learning. Together, these aspects ensure that there is continued dialogue about Thinking Skills so that specific areas of development can be identified and acted upon.<sup>9</sup>

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<sup>5</sup> Ibid

<sup>6</sup> Reflective proforma

<sup>7</sup> Digital drive evidence

<sup>8</sup> Ibid

<sup>9</sup> Digital drive evidence

There is ample evidence to indicate that DNS is receptive to change and innovation. The development of cognitive approaches has been part of the school's vision and drive for improvement since 2020 (although the roots of this focus have been in place for many 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.<sup>10</sup> Indeed, the rate of progress has been exceptional. 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 questioning for enquiry.<sup>11</sup>

There is an organic Thinking Action Plan by which the agreed cognitive tools, strategies and resources are being implemented and taught across the school. The range of cognitive developments indicates that plans are aspirational, designed to empower children to progressively take ownership of their cognitive development.<sup>12</sup> Also, plans and training 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 DNS. Planning and Drive Team meetings provide an effective springboard for action in order that all lessons include thinking skills. This is largely due to a clear and systematic approach. Having introduced habits of mind and visual tools, the school has developed some exceptional theme-based work linked to thinking tools and dispositional development. The 'Ladder of Inference' (linked to the fostering of analysis, decision making and action) is an example of this innovative work. Children routinely work in groups and demonstrate high levels of communication and cooperation. There is ample evidence of teaching and learning benefiting from the application of Optical Frames, P4C and Thinking Keys. Bloom's Taxonomy clearly underpins much of this work and is used well as a core foundation for embedding the language of thinking throughout DNS. As a result of this excellent pedagogical practice, children show clear development in logical thinking, criticality and creativity. Examples of children's work exhibit these qualities both graphically and verbally. There is a universal staff

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<sup>10</sup> Ibid

<sup>11</sup> Ibid

<sup>12</sup> Reflective proforma and digital drive evidence

belief that all children are capable of making progress and this further supports the school's commitment to holistic and inclusive cognitive education. This clearly demonstrates how it is one of the school's main aims.<sup>13</sup>

The school's pedagogical approach is informed by ongoing CPD which has been in place since 2020. Training is progressively developmental starting with implementation strategies and moving on to systematic monitoring and evaluation of children's individual progress and achievement. Certificates of training completion are provided by a national training organisation, and this secures a high level of quality assurance. Teachers from DNS have made a full commitment to partnership work to further add to the school's development. The emphasis placed on the learning environment is also clearly illustrated in the evidence provided by the school. These elements, combined with DNS's commitment to the holistic of all children.<sup>14</sup>

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 awards and displays of high-quality pieces of work. DNS has clear evidence of developing learning and teaching, and the innovative theme-based approach has been carefully embedded within lessons to encourage children to increasingly move out of their learning comfort zone. This is an interesting area for continued development, perhaps through formalising some of the successful thinking skills and dispositional qualities into self-regulatory strategies for moving out of a 'I am stuck' moment.<sup>15</sup>

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<sup>13</sup> Ibid

<sup>14</sup> Digital drive evidence

<sup>15</sup> Ibid

## **Training**

The Drive Team are well versed in the theory, application and assessment of cognitive education and psychological well-being. The highly trained Drive Team has undoubtedly influenced the focus on establishing a common thinking language and approach across the curriculum.<sup>16</sup> There is an ongoing 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. There is a cycle of lesson study in place that centres on the consistent use of thinking tools and this follows a clear weekly thematic plan. DNS works in close alignment with an established training provider ('Rethinkers') who are extremely well-versed in the development of the Thinking Schools approach. This blend of internal and external training provision has done much to secure the school's proactive development vision. There is an explicit focus on continuity and progression so that children's thinking is taken forward effectively through the use of key thinking tools aligned to skilful mediation by teachers. 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 in the school's communications. Staff are encouraged to work together and to provide mutual support through the development of thinking generally and also through subject contexts. Good practice is shared, and lesson observations are used extensively to evaluate and share good practice in a climate of mutual support. This has involved taking more of a practitioner research approach to data collection, analysis and application and this is an area that would benefit from further development as the school moves forward.<sup>17</sup>

## **Assessment and Outcomes**

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. Assessments are based on long-term focused observation and interpretation of individual children. Evidence is gathered from a range of sources based on classroom artefacts spanning a number of practical tasks, creative work and examples of thinking tools being used in action. The

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<sup>16</sup> Reflective proforma and digital drive evidence

<sup>17</sup> Ibid

assessments are geared towards social, emotional, physical, cognitive and language development together with specific thinking skills. Parents receive regular reviews based on the data gathered in order to maintain the strong school and parent partnership. Assessments via MALS, Discovery Evaluation and 'My Achievements With My Children' indicate a largely high cognitive and self-perception development together with signposting strategies for further support in the development of children's thinking and learning. DNS 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.<sup>18</sup>

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.<sup>19</sup> There is qualitative data from staff, pupils and parents about how the development of learning behaviours are associated with positive outcomes for pupils and are associated with academic outcomes and improved motivation. The school's own internal analysis and presentation of these outcomes reflect a positive examination trend, together with internal growth, and demonstrates transparency and aspiration for further improvement.<sup>20</sup>

### **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 effective use of the SPARE wheel model of illuminative evaluation on which the Thinking School approach is based. A range of high-quality evaluative practices permeate through DNS and include Teacher Evaluations, Teacher Achievements and Self-Assessments. Through a collaborative approach to leadership, the Drive Team have established a culture of thinking and school improvement built on regular opportunities for staff to discuss the process and efficacy of cognitive education and how it

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<sup>18</sup> Ibid

<sup>19</sup> Reflective Pro-forma

<sup>20</sup> Digital drive evidence

can be maintained and improved. There is a genuine feel that ‘this is the way we do things around here’.

### **Ownership**

There is no doubt that DNS has made a full commitment to developing and embedding cognitive education throughout the school. From the initial introduction of cognitive tools and practices in 2020, the school has expanded its repertoire of cognitive pedagogy and demonstrates a wide range of practice geared towards the development of thinking. 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 training geared towards developing teachers as cognitive coaches, 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. DNS is a wonderful example of child-centred educational provision based on an unswerving commitment to the holistic metacognitive development of all children such that they develop as lifelong learners. The school is therefore well placed to be a centre of excellence locally, nationally and internationally.

### **Conclusion**

The range of evidence submitted undoubtedly indicates that Discovery 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 November 2026.

I would like to thank the school for the evidence base that provided the lens through which the excellent practice could be viewed.



## 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.
- Consider the introduction of Thinking Routines (see Making Thinking Visible by Ron Ritchart – Harvard University) as a complimentary dimension to the excellent theme-based work. This will further enhance the development of Habits of Mind and also add to the teaching repertoire.
- Further integrate thinking processes with questioning, visual tools, dispositional development, thinking routines, assessment of process, assessment of product, evaluation of process and evaluation of product. This should take the form of an overview for how these elements are integrated.
- Focus lesson observations on 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.
- Consider further, the use of the Myself As a Learner Scale (MALS) as integral to assessment practices to add to the excellent qualitative practice already in place.
- Consider developing a clear and dedicated Thinking Schools section on the school website to add to the evidence base provided via the Reflective Proforma.
- 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 this at all levels of leadership and classroom practice.

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



**Dr Dave Walters**

**Thinking Schools @Exeter  
School of Education  
Faculty of Humanities, Arts and Social Sciences  
University of Exeter**

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

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