Philosophy for Children

Getting Started at Home and School

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Assessment, Praise and Learned Helplessness

We often see children who seem very able and might even be labelled as ‘gifted’ and yet do not seem to fulfil their potential. Other children seem to ‘lose’ their gifts altogether. There are reasons that have been discovered as to why this is so and they challenge how we measure children’s progress and how we use questioning to help children think for themselves.

We need to understand what is meant by ‘intelligence’, how we measure it, what we mean by ‘gifted’ and how we can use better techniques for assessment and learning to help avoid children failing to develop their potential.

This document is a brief guide to these ideas with some practical suggestions as to how to implement them in the classroom and at home.

What is 'Intelligence'?

We have come to realise that intelligence is not a simple thing but one that is displayed in different ways by different people. Howard Gardner coined the phrase 'Multiple Intelligences' to illustrate this with the idea that people have skills in different areas. He identified seven areas at first and has since described others:

Verbal-Linguistic

> Linguistic intelligence relates to the ability to think in words, to use language to describe and understand complex meanings and to show sensitivity to the meanings as well as the order of words, their sounds, rhythms, and inflections
>
> People with linguistic intelligence are able to reflect on the use of language in everyday life and have skill in the use of words for expressive and practical purposes. They enjoy and have skill in reading as well as having an ability and interest in writing projects such as poems, stories, books, or letters. They may have skills in oral communication for persuasion, memorisation, and description.

Logical-Mathematical

> Logical-Mathematical Intelligence relates to the ability to think of cause and effect and to understand relationships among actions, objects, or ideas, the ability to calculate, quantify, consider propositions, and perform complex mathematical or logical operations.
>
> People with logical-mathematical intelligence are able to develop inductive and deductive reasoning skills, as well as critical and creative problem-solving. They have skills in organisation, problem solving, and logical reasoning as well as a curiosity for problems and a natural desire for investigation. They work with numbers for mathematical operations such as addition and division.

Visual-Spacial

> Spacial Intelligence (or Visual Spacial) is the ability to think in pictures and to perceive the visual world accurately, to be able to think in three dimensions and to transform your perceptions and recreate aspects of your visual experience via imagination. It also gives an ability or aptitude to work with objects.
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> People with visual-spacial intelligence are able to use mental imagery for observation, artistic, creative, and other visual activities, create artistic designs, drawings, paintings, or other creative techniques and media and are able to make, build, or assemble things.

Musical

Musical Intelligence comprises the ability to think in terms of sounds, rhythms and melodies, to be sensitive to pitch, rhythm, timbre, and tone and to be able to recognize, create, and reproduce music by using an instrument or the voice. As well as producing sounds, it also concerns the ability to listen actively.

People with musical intelligence have an awareness of and sensitivity to music, rhythms, tunes, and melody. They may have skills and experience in playing a musical instrument or a good voice for singing in tune and along with other people. They also actively enjoy listening to music.

Bodily-Kinaesthetic

Bodily-Kinaesthetic Intelligence is the ability to think in terms of movement and to use the body in skilled and complex ways in expressive as well as goal-directed activities. It also gives a sense of timing and co-ordination.

People with bodily-kinaesthetic intelligence tend to have an ability to move the whole body for physical activities such as balancing, co-ordination, and sports. They also have an ability to use the body in expressive, rhythmic, and imitative ways and to use the hands with dexterity and skill for detailed activities and small work.

Inter-Personal

Interpersonal Intelligence is the ability to think about and understand other people, to have empathy and recognise distinctions among people and to appreciate their views with a sensitivity to their motives, moods, and intentions. This includes interacting effectively with one or more people among family, friends, or working relationships.

People with interpersonal intelligence have a sensitivity to, and understanding of, other people's moods, feelings, and points of view. They are able to maintain good relationships with other people, especially friends and siblings and find it easy to take a leadership role among people through problem solving and influence.

Intra-Personal

Intra-personal Intelligence is the ability to think about and understand yourself, to be aware of your strengths and weaknesses and to achieve personal goals through effectively planning. This includes reflecting on and monitoring your thoughts and feelings and regulating them effectively.

People with intra-personal intelligence have an awareness of their own ideas, abilities and personal decision-making skills. They have an awareness of goals and self-correction and monitoring in light of a goal, are able to regulate and manage their feelings, moods and emotional responses as well as the ability to regulate their mental activities and behaviour.

Naturalistic

> Naturalistic Intelligence is the ability to understand the natural world including plants, animals, and scientific studies, to recognise and classify individuals, species, and relationships within ecosystems and to interact effectively with living creatures and understand patterns of life and forces of nature.
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> People with natural intelligence can display an understanding of animal behaviour, their needs and characteristics or have an ability to work with plants through roles such as gardening, farming, and horticulture. They may also possess a knowledge of natural living energy forces, including those of the weather and physics.

Many schools have used 'learning styles audits' to appraise how their students are best suited to learning. The students are then informed of their best learning style and they choose activities that best suit their learning style.

The danger is that the students believe that they are therefore not good at the other intelligences and so give up when presented with a task that they believe they are not suited to.

Where multiple intelligences theory is beneficial is for the school to allow the teacher to audit the techniques that they are going to use. This ensures that they deliver materials and methods that balance across all of the learning styles.

In a similar way, many schools are now looking at how they balance logical tasks (Left Brain) against creative tasks (Right Brain). If we balance these two areas of thought process, children have been found to learn better and to be more motivated.

How do we measure ‘Intelligence’ and ‘Reasoning’ ?

There is a need to measure ability to allow the teacher, or parent, to best pitch learning materials to the child. Again, as with learning styles, we use standardised testing to determine the individual’s abilities against a known scale.

Two simple measures are the Cognitive Abilities Tests from NFER-Nelson, a large educational research body, and the Wide Range Achievement Test from Jastak Associates.

The CAT tests measures the three principal forms of reasoning – verbal, non-verbal and numerical – as well as an element of spatial ability from Year 4 upwards. To quote NFER, “The test as a whole assesses an individual’s ability to manipulate and reason with three different types of symbols: words, quantities and spatial patterns, each of which plays an important part in human thought. A section, called a test battery, of the complete CAT test is devoted to each of these ways of reasoning, and each battery is further divided into three sorts of test item that test different aspects of that style of reasoning.” 16,000 students were tested and this data used to establish the norms against which other children could be compared.

Another advantage of the CAT tests is that the data is used to give some predictive data about how a child will perform in the national attainment tests, such as at the end of Key Stages, at GCSE and A-Level / IB.

Where these tests are important is to give an understanding of a child’s reasoning skills and these skills are largely independent of prior knowledge and the taught curriculum. I say ‘largely’ as all testing is influenced by opportunities to learn, parental support, educational experience as well as emotional and physical well-being. Reasoning tests, such as CAT, have been shown to be less influenced by these factors than more traditional attainment tests.

If children are performing less well than their CATs indicate that they should, it tells the teacher that they are under-performing. Occasionally, with good teaching, a child can achieve better than their tests could indicate. However if the child is suffering anxieties at the time of the test (such as bullying or difficulties out of school), they can under-perform in their test.

The WRAT tests follow a similar methodology, testing children for ability in word recognition and, optionally, mathematical skills. The reading test is well respected and has demonstrated a high level of accuracy. The advantage is that these tests can be performed as low as Year 1. An annual reading test gives immediate information about the progress of the child and can be extremely beneficial in alerting staff to halts or delays in learning.

How do we measure academic attainment?

In the UK, academic attainment is measured against the set curriculum using nationally set tests. These are designed to measure the amount of the curriculum that has been learned, that is a comparison of what has been taught as compared with what has been learned and retained.

The core tests are in English, Mathematics and Science. Using the observations of teachers and the results of the tests, children are assigned a level that best fits their level of achievement. On occasions, levels are reported with an a, b or c suffix to show whether a child has confidently reached a level, reached a level or barely reached a level.

These are the levels that are expected for all children to reach at 7, 11 and 14:

Level	Age 7	Age 11	Age 14
8			Exceptional
7			Above Expectations
6		Exceptional	At Level Expected
5		Above Expectations	At Level Expected
4	Exceptional	At Level Expected	Below Expectations
3	Above Expectations	Below Expectations	Below Expectations
2a /2b/2c	At Level Expected	Below Expectations	
1	Below Expectations		

It is important to recognise that these are measures of the factual learning that a child has acquired and their ability to perform in a test of that knowledge on a given day or through a set task.

During the academic year, a teacher will use simple tests or tasks to ensure that a child has learned part of particular topic or a theory or skill. We usually refer to this as ‘Formative Assessment’. At the end of a course the knowledge gained is tested and an overall grade given. We call this ‘Summative Assessment’.

So, what is meant by ‘Gifted and Talented’?

We are told by the government that we must identify the gifted and talented children in school and have a distinct and separate programme to help them maximise the potential of their gifts. However, what do we mean by ‘Gifted and Talented’ or G&T?

We are told to measure giftedness (high ability in academic subjects) or talents (high ability in sport, music, art or P.E.) using the following methods:

Teacher and Parental Observation
Prolonged (more than 2 years) performance in an academic area.
Gifted and Talented Checklists
Intelligence or Ability Testing
Behaviour in the Learning Environment

The Renzuli Enrichment Triad method has found that a person who is G&T generally has above average ability, a commitment to tasks and creativity, and is skilled at taking ideas and relating them to new situations.

This has been taken further to produce a test called the Renzuli-Hartman Scale to better judge characteristics of gifts that might be missed by the simple measures outlined above. It also can be used from Reception to Year 13.

We are told that 5 to 10% of a school population would be expected to be G&T with 2/3 of those having gifts and 1/3 having talents. The traditional wisdom is that G&T represents an innate ability and is therefore fixed (static). It can be tested for in a simple way and is there for the purpose of the school, to identify, label and use to guide the curriculum.

Many, including Dr Judy Lupart at the University of Alberta, have begun to realise that gifts and talents are present in a dynamic way and need multiple measures to be identified within contexts, rather than through standardised procedures (for example, the statement that all children gaining a level 3 at Key Stage 1 must be gifted is only true if they can apply their knowledge in new situations and put effort into their learning). They are there to guide learning and are therefore child-centric.

The message is that, whilst some children may have higher abilities in reading, number-work, reasoning, leadership, etc. they are not necessarily ‘gifted’ or ‘talented’. It is the application of those gifts and talents that marks them out from others in their peer-group.

The danger of the ‘fixed’ view of giftedness will be introduced in the next section.

Ability, Success, Praise and Giftedness.

If giftedness is an innate ability in some people, one would believe that identifying it, praising a child for possessing it and separating them out to benefit from a 'distinct curriculum' would lead to all gifted children succeeding.

Unfortunately, work by researchers, such as Carol Dweck, Norman Doidge and Robert Sternberg has shown that the 'Fixed Mindset', where intellectual ability is a fixed trait, is not an accurate picture of ability.

Students with the 'Fixed Mindset' believe that they have a certain amount of intelligence that they are born with and that is what they will always have. They can learn to use it but they cannot become more intelligent or less intelligent.

The main way that children learn about intelligence is through our praise of their ability - "That's fantastic", "What a beautiful picture", "You are a brilliant swimmer", etc. They learn about our view of their ability and categorise themselves as able or not.

The danger here is that it has been shown that they will develop anxieties about demonstrating this ability very quickly. You have told them that they are brilliant and so they become scared that the next picture, performance or academic demonstration will not meet up to your expectation. Consequently they become preoccupied with proving to parents and teachers how intelligent they are and naturally choose tasks that will make them look good or avoid that activity altogether. How many potentially good child musicians or sportsmen seem to stop, just when we thought that they were beginning to show their ability.

The 'Growth Mindset' children learn that anything is possible through effort. They know that skilled musicians or sportsmen have to put in years of effort and practice to reach their level. They will choose to try tasks at which they might not succeed with because they know the process of trying will teach them something.

To quote Carol Dweck (The Perils and Promises of Praise, Educational Leadership, October 2007):

> *"The fixed and growth mind-sets create two different psychological worlds. In the fixed mindset, students care first and foremost about how they'll be judged: smart or not smart. Repeatedly, students with this mind-set reject opportunities to learn if they might make mistakes (Hong, Chiu, Dweck, Lin, & Wan, 1999; Mueller & Dweck, 1998). When they do make mistakes or reveal deficiencies, rather than correct them, they try to hide them (Nussbaum & Dweck, 2007).*
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> *They are also afraid of effort because effort makes them feel dumb. They believe that if you have the ability, you shouldn't need effort (Blackwell, Trzesniewski, & Dweck, 2007), that ability should bring success all by itself. This is one of the worst beliefs that students can hold. It can cause many bright students to stop working in school when the curriculum becomes challenging. Finally, students in the fixed mindset don't recover*

well from setbacks. When they hit a setback in school, they decrease their efforts and consider cheating (Blackwell et al., 2007). The idea of fixed intelligence does not offer them viable ways to improve.

Let's get inside the head of a student with a fixed mindset as he sits in his classroom, confronted with algebra for the first time. Up until then, he has breezed through maths. Even when he barely paid attention in class and skimped on his homework, he always got As. But this is different. It's hard. The student feels anxious and thinks, "What if I'm not as good at maths as I thought? What if other kids understand it and I don't?" At some level, he realises that he has two choices: try hard, or turn off. His interest in maths begins to wane, and his attention wanders. He tells himself, "Who cares about this stuff? It's for nerds. I could do it if I wanted to, but it's so boring. You don't see CEOs and sports stars solving for x and y."

By contrast, in the growth mindset, students care about learning. When they make a mistake or exhibit a deficiency, they correct it (Blackwell et al., 2007; Nussbaum & Dweck, 2007). For them, effort is a positive thing: It ignites their intelligence and causes it to grow. In the face of failure, these students escalate their efforts and look for new learning strategies. Let's look at another student—one who has a growth mindset—having her first encounter with algebra. She finds it new, hard, and confusing, unlike anything else she has ever learned. But she's determined to understand it. She listens to everything the teacher says, asks the teacher questions after class, and takes her textbook home and reads the chapter over twice. As she begins to get it, she feels exhilarated. A new world of maths opens up for her.

It is not surprising, then, that when we have followed students over challenging school transitions or courses, we find that those with growth mind-sets outperform their classmates with fixed mindsets—even when they entered with equal skills and knowledge. A growth mind-set fosters the growth of ability over time (Blackwell et al., 2007; Mangels, Butterfield, Lamb, Good, & Dweck, 2006; see also Grant & Dweck, 2003)."

What is most concerning for the system of assessment in school, and the way that we measure children at home, is that praise for the product of a child's efforts has become the focus. Praise is intrinsically linked with a student's view of intelligence and the research has shown that praising, rewarding, marking and reporting *attainment* leads students towards the fixed-mindset.

Conversely, praising *effort* leads students to realise that the journey is more important than the destination.

Think about two children - one gets a grade of 9/10 for attainment and 4/10 for effort. We mean to say that "you were much better than everyone else but we know that you can do better". What the child reads is that "you got an excellent mark without any real effort".

Another child is given a grade of 3/10 for attainment and 9/10 for effort. To the child this means that no matter how hard they try, they cannot succeed. "You put in an excellent level of effort but you still failed"

Without the attainment mark, we just comment on effort. The child knows that they have tried as hard as they could (or not) in our view and that sets the level for next time.

Reporting this to parents and marking student work therefore stresses the comment and the important vehicle of assessment information over any numerical grade. The comment tells the child how their effort had been and how they could improve next time.

Where an assessment of the result was wanted, for example a story, picture or song, the 'two stars and a wish' approach was found to be useful at the primary-age level. In this approach, the piece of work was discussed in a non-threatening way by the peer-group and invitations made for them to give 2 stars - things they liked about it - and a wish - something that could make it even better next time.

Obviously, simple wrong-right answers in tests will tell a child whether they achieved 9/10 or not but these should be avoided wherever possible.

In the research, the effect was even more alarming for parents and teachers as children who had been in systems where praise for attainment was the norm naturally chose easier tasks than children who had been used to praise for effort. In other words, those praised for intelligence lost their confidence in their ability and, eventually, performed less well - they appeared to become less intelligent or able.

Long term, this has been shown to have a devastating effect on children and young adults.

The fixed mindset students, referred to as *Entity Learners* developed a belief that intelligence was fixed. They concentrated on looking smart and not thick and so chose easy, low effort tasks where they could quickly outperform others. They avoided high effort, difficult tasks and often faced setbacks with difficulty.

Long term, they began to over-generalise from one experience or failure and exaggerated these failures, relative to their successes. They categorised themselves in unflattering ways and lost faith in their ability to perform tasks and the value of effort. Finally, they began to set *self-worth contingencies*, that is the extent to which children and others link self-worth to external feedback and success in four areas (social, academic, activities, and appearance). These were observed to be major factors in adolescent depression, particularly amongst girls.

Research has suggested that an entity-based learning view is a major cause of under-performance in University and later careers.

Conversely, Growth Mindset or *Incremental Learners* believe that intelligence forms and grows through learning and effort and that they can become smarter through learning. They thus engage fully in new tasks, seeking to enrich their experiences through the effort of trying something new and difficult, stretching themselves and applying skills to new situations. They begin to avoid easier tasks themselves.

Incremental Learners will outperform expectations through sheer effort and sticking-power.

We can promote Incremental Learning over Entity Learning by using comments and marks about effort and the process of learning and avoid making judgements about intelligence and ability. A school that promotes the seeking of challenges, effort, reflective learning, skills and the making of knowledge creates a community that seeks to learn.

Students, including those who are demonstrating a higher level of ability, need to have more tasks that are not simply correct or not correct, that are open ended and meaningful and which extend intelligence through reasoning and emphasise reflection as important.

Encouraging Incremental Learning

If we are to encourage students to think about problems in a more open way, we must change the language of learning. Thinking time is essential and open-ended questioning is important. Problems that have simple solutions do not promote students to think more deeply.

Once students have spent time thinking, sharing their ideas with others helps them go over their ideas in their own minds. (It has often been said that we remember 10% of what we are told but 90% of what we tell others.) Group responses to their thoughts and the adult playing 'devil's advocate' by inviting contradictory responses help to further the idea that there is always another point of view to consider.

Paul Black and Dylan Wiliam, in their 2001 paper "Inside the Black Box" suggest that the teacher or parent moves from being one who presents facts to one who explores the child's or children's ideas and brings them into the investigation until they learn the information that is required from the lesson or topic. They spend more time framing questions and exploring issues around the children's understanding. The student moves from being a passive observer - the sponge waiting to soak up the knowledge supplied by the teacher, to one who knows that learning depends on the ability to express and discuss ideas.

An extension of this idea is that of 'Socratic Teaching'. This is a moral and intellectual discipline founded on reason. In this, we focus on giving the learner questions and not simple answers. We probe the nature of the question or subject, inquire about the data or information that we have and consider alternative interpretations. It is often described as teaching by asking instead of telling.

As the questions can evolve in a different way each time a topic is addressed and with different groups, we have to arrange our learning resources differently. Simple multimedia presentations that just deliver facts limit the questioning too much although it is still necessary to balance the investigative approach with delivery of the curriculum.

Socratic Teaching uses questioning as the primary form of education with the search for knowledge as a co-operative process to draw out understanding from within. This is not dissimilar at first glance to the Constructivist model of teaching where we seek to find out what students think before 'overwriting' their misconceptions or wrong ideas with what we, as adults, know to be true. With Socratic Teaching, you encourage the students to find these 'truths' through reason and discourse.

Robert Fisher summarised this discourse process with four ideas:

> *Because we don't know the truth, we must talk to find it.*
> *The teacher acts as 'midwife', helping the students give birth to their ideas.*
> *The teacher professes ignorance to provoke, motivate and facilitate student thinking.*
> *The teacher promotes the value of 'lived beliefs' over 'received beliefs'.*

Socratic Teaching promotes thinking time above all. Teachers probe for student *understanding* rather than just *memorization*. The aim is to foster the application of knowledge, its analysis, synthesis and evaluation.

Questions should be used that seek clarification, reasons, evidence, viewpoints, perspectives, examples, implications and consequences as well as questions about the questions themselves.

Philosophy for Children - A System for Socratic Enquiry and Teaching

We have looked at the system for Socratic Teaching but what we need is a framework to build this into the home or classroom situation.

In 1969, Professor Matthew Lipman devised a system of philosophical enquiry for children and P4C - Philosophy for Children - was conceived.

Through research, it has been found to be highly successful.

In a 1995 study of over 400 students, David Perkins found that there were positive and measurable gains in reasoning, fluency and productivity of ideas, academic readiness and basic skill performance in English and Maths.

In 2001, the 'Clackmannanshire Experiment' found significant improvements in NFER CATs, Myself as a Learner Tests and skills such as communication, confidence, concentration and emotional skills. This study compared nearly 200 students who were either following a P4C programme or the basic curriculum.

Tuckswood Community First School found that children following the programme through Key Stage 1 (Infants) were able to develop skills such as 'being able to disagree with another person without falling out' and 'being able to justify your reasons and thinking'. The school also experienced a much richer level of reasoning and debate amongst the children.

In another study, children who used P4C were compared against a group with identical ability who had extra English and Mathematics lessons. Those doing P4C did better in English and Maths tests than those who had had extra lessons of English and Maths!

So, how do we go about a P4C enquiry?

In P4C we begin with the concept of parent or teacher as the facilitator of the enquiry and learning as a social activity. The role of the story as a valuable stimulus was raised as a context for questioning.

The topic being studied is examined and a stimulus chosen, whether a story, picture, piece of music, concept, etc. It must be something that invites thought, enquiry, questions, discussion or argument. It could be as complex as a whole piece of music or as simple as the number "10".

The group considers this stimulus through a time for individual thinking. When this is over, the children pair up and decide upon questions that they would like to ask.

For this, a philosophical question is one that invites people to share their different views and interpretations.

These questions are written up for the whole group to see and the questions aired through a brief discussion. A small number of questions are chosen by voting and the enquiry begins.

Children can vote in a number of ways. These can be by standing next to the question they like, using a count of hands for each question or by sharing a number of points out over questions, either as one point per question or split according to how important they consider them.

However the enquiry is carried out, the children all have to abide by a number of rules - the 4C's of P4C. All enquiries must be carried out in a Critical, Creative, Collaborative and Caring environment.

All subjects are suitable for introducing P4C enquiries. The reference to the number 10 above was taken from a study where children in Year 5 at a US school were able to deduce binary mathematics where the facilitator asked nothing but questions.

In fact, Colin Hannaford, author of ' Socrates' Method for 9 to 19 Year Olds, Learning Mathematics in 10 minutes a Day' says:

"To teach what the words in a maths textbook mean is immensely interesting and rewarding. It is also tiring. But the effect is miraculous. (Teachers) soon find pupils display increasing confidence, self-reliance, enthusiasm and trust for each other. Children who are trained like this, to be self-reliant and self-directed, will continue to learn far more independently for the rest of their lives."

The next section has some questions that you might find useful for leading the process.

Questions to lead Philosophical Enquiry

Questions that seek clarification
- Can you explain that…?
- What do you mean that…?
- Can you give me an example of…?
- How does that help…?
- Does anyone have a question…?

Questions that probe reasons and evidence
- Why do you think that…?
- How do we know that…?
- What are your reasons…?
- Do you have evidence…?
- Can you give me an example/counter-example…?

Questions that explore alternative views
Can you put it another way…?
Is there another point of view…?
What if someone were to suggest that…?
What would someone who disagreed with you say…?
What is the difference between those views/ideas…?

Questions that test implications and consequences
What follows on from what you say…?
Does that fit with what we said earlier…?
What would be the consequence of that…?
Is there a general rule for that…?
How could you test to see if it were true…?

Questions about the questions/discussion
Do you have a question about that…?
What kind of question is it…?
How does what was said help us…?
Where have we got to…?
Who can summarise so far…?
Are we any closer to answering the question…?

Adapted from '*Teaching Thinking – Philosophical Enquiry in the Classroom'* by Robert Fisher, Cassell 1998.