High Performance Learning issue
Spring Term 2018
- Personification of ACP characteristics
- HPL and the whole student
- HPL myth-busting
Welcome to a rather different Accolade! Other issues have concentrated on one area of school life, for example STEM, MFL, or our school ethos. This edition has a deliberately wide-angle lens and provides an overview of High Performance Learning (HPL).

St Mary’s School, Cambridge has adopted HPL since September and we are on a two year journey towards full accreditation as an HPL school. We have willingly embraced this educational philosophy since it fits integrally with our school ethos and our Mary Ward charism in terms of promoting the view that there is ‘room at the top’ for many more students than traditional approaches to Teaching & Learning might suggest.

You will read an introduction to this philosophy of education by Professor Deborah Eyre, who is the world expert in this field.

Professor Eyre is delighted to be working with our school because she is interested in seeing the benefits of HPL in a single-sex environment; her previous work has been with international and UK co-educational settings. She is, in particular, interested in the impact of her approach on girls and young women. We are delighted that HPL provides an evidence-based approach to continuous improvement and, for us, acts as a clear differentiator since no other local independent school has adopted this progressive and child-centred approach to teaching, learning and student well-being. Professor Eyre considers that we have made significant strides and fully embraced HPL and to that end, as an exemplary practitioner, the school has been awarded HPL Ambassador School status; an honour which we have been delighted to accept.

We offered parents’ information evenings in January for Junior School and Senior School parents and were delighted with the number of parents who gave up their time to learn about HPL and how this approach to learning can help their daughters. We will be running another information evening in June to update parents about our progress over the next six months.

Over the following pages you will become familiar with HPL’s Values, Attitudes and Attributes (VAAs) and Advanced Cognitive Performance characteristics (ACPs). The HPL philosophy highlights that these VAAs and ACPs “need to become so much a part of the way the school operates that they become the language of the school used by students as well as staff and parents” – and so we encourage parents to engage with the philosophy as much as possible.

The VAAs and ACPs “need to become so much a part of the way the school operates that they become the language of the school used by students as well as staff and parents”.

You will hear from teachers across the school about how they are adopting HPL VAAs and ACPs in their classrooms. You will be able to read about how different academic disciplines have taken on board HPL, whether in Biology and Physics, Textiles and Art, History and Geography, Sport and English.

As I said to our parents at the conclusion of the Senior School information evening, HPL is offering St Mary’s School, Cambridge positive challenge and discernment regarding many aspects of school life, including how we track and monitor student progress and how we report that to our parents, as well as how we reward students through occasions such as our annual Prize Giving. We are all on a learning journey!

Charlotte Avery
Building a better brain

Good schools and caring parents have always sought to maximise individual potential but have, in bygone years, accepted that high levels of educational performance would always be for the minority, rather than the majority.

In the last 40 years or so, work in the fields of neuroscience and psychology has created a challenge to this orthodoxy, suggesting that the brain is more plastic and malleable than we thought. In short, we can make ourselves more intelligent. So instead of seeing inherited intelligence and talent as fixed traits, we should all be seeing them as a starting point which can be developed through practice and training.

It takes good schooling, good parenting, and dedication and hard work from students.

St Mary’s School, Cambridge is at the start of its journey to embed HPL philosophy in Teaching & Learning, but is already seeing attitudes of students change, and staff embracing this new approach. The school is ambitiously working towards the HPL Award for World Class Schools and, once achieved, will join an elite group of truly world class schools.

Already St Mary’s School, Cambridge is a key member of the HPL network of great schools, and is in regular contact with schools both close to home and further afield – including Qatar, Mexico and Norway. Exchanging Teaching & Learning practice with good schools in such differing contexts is invigorating for the whole school community.

Of great importance is the school’s role in leading a group of Girls’ Schools Association members of the HPL network of great schools, and is already seeing attitudes of class schools.

The 7 Pillars of High Performance

**Values, Attitudes and Attributes (VAAs) – HPL and the whole student**

At St Mary’s School, Cambridge we have long since valued personalised pastoral care and an unwavering commitment to student well-being, and our adoption of HPL as a whole school philosophy enables us to further invest our efforts in this regard.

There has been a great deal of study undertaken into character education and how to nurture soft skills and positive attitudes towards work readiness, and HPL’s VAAs are designed to help students to be ready to learn, and ready to work, but furthermore – ready for life.

The VAAs are 10 particular behaviours that we want our students to develop in order for them to become thinking and caring people who are well-rounded individuals, as opposed to simply being ‘test-passing machines’. The VAAs fall into the following three groups:

- Empathetic – working alone and with others to achieve strong outcomes – this group includes being collaborative, concerned for society and confident
- Agile – having a desire to learn and being prepared to use multiple approaches to achieve outcomes; the dispositions that enable young people to be autonomous and contribute – this group includes being enquiring, creative and enterprising, open-minded and risk-takers
- Hard-working – concentration and practice are required not just in pursuit of understanding but also in refining or improving – this group comprises practice, perseverance and resilience.

Whilst all of these behaviours are seen in lessons and across the wider daily life of the school, we think that they deserve their own space too and, to maximise the benefit of each of these VAAs, students need to nurture the confidence required to understand and manage their own mental well-being.

To this end, Year 10 students are trying out a series of workshops in which they will explore some of the VAAs and use them to develop a clearer sense of how to nurture their own well-being (and maximise their own learning). The first of these workshops focused on coping with stress, because resilience, when faced with stressful situations, both academic and non-academic, is an aspect of HPL. The session aimed to encourage students to be aware of the need to protect their well-being, and to ensure students are aware of coping strategies that they can apply to help manage stress. Other workshop topics will range from managing emotions and what to put in a mental health First Aid kit, being a good friend, coping with negative thoughts, and ‘the brain and learning’, and the links to HPL’s VAAs will be explored throughout. We look forward to following and supporting this group of students’ well-being journey and will be inviting them to share their conclusions with fellow students, staff and parents in due course.

**With students, not to them**

HPL rests on seven pillars of high performance and, whilst all are crucial to bear in mind when building high performance, one has a particular resonance with us: ‘with students, not to them’.

We have reaped the benefits of engaging and involving students in the life of the school for a long time, whether through consultations via the Student Council, student-led planning of fundraising landmarks like Lourdes Fundraising Fortnight, or student input into the management of the Learning Resource Centre. HPL has prompted us to take student involvement one step further.

We have appointed a team of ‘learning detectives’; students from Year 7 to Year 9, who will meet every two weeks with me to develop Teaching & Learning throughout the school. Over the next few weeks our team of learning detectives will be working on topics such as ‘making learning stick’, and students’ self-assessment of progress with the ACPs.

We look forward to continuing this journey together, with our students right at the centre of all that we do.

Mrs Kate Latham, Director of Teaching & Learning

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Professor Deborah Eyre, Founder of HPL

The brain is more plastic and malleable than we thought. In short, we can make ourselves more intelligent. It takes good schooling; good parenting; and dedication and hard work from students.
Junior School pupils’ personification of ACP characteristics

In the Autumn Term of the 2017/2018 academic year our Junior School pupils were introduced to High Performance Learning through the ACPs, perhaps more readily thought of as ‘thinking skills.’

These skills might include anything from having the ability to break down a task and use a broad range of appropriate strategies, to articulating and defending personal views based on evidence, or hypothesising, to analysing and synthesising evidence.

There are 20 ACP characteristics in total, commonly grouped under five headings:

- **Meta-thinking**
- **Linking**
- **Analysing**
- **Creating**
- **Realising**

In order to encourage the Junior School pupils to become familiar with the five ACP groups, we invited them to reflect on each one and to think creatively about what they could do to remember them. We were truly impressed with the girls’ efforts to interpret and depict each ACP group, and particularly admired the animals that were created – so much so that these are now used to remind students and staff across the school of the new language of ACPs. The response from Junior School parents has also been very supportive – with positive feedback on this excellent development and especially on the way the girls were involved in the design and naming of the characters, and what a sense of fun and excitement about the new characters this created.

To truly embed the ACP animal characters into Junior School life we have completely changed the way we award House Points. We now have pastoral House Points (Beatrice Bee stickers) and academic House Points (animal character stickers) so that the girls are awarded for specific achievements, either pastoral or academic. The use of the ACP animal stickers for academic House Points helps to reinforce the importance of the girls using different thinking skills in their learning, and it also provides teachers with valuable evidence to assess progression in each ACP.

Over the next few pages you can find out a little more about each ACP group, and get to know the Junior School pupils’ ACP animals.

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**Meta-thinking**

**There are four ACPs under the meta-thinking heading**

**Metacognition:** learners possess a reflective understanding of their own learning process.

**Self-regulation:** the ability to monitor, evaluate and self-correct.

**Strategy planning:** independent problem solving, and thinking in the right way for a particular task.

**Intellectual confidence:** articulating and defending personal views based on evidence.

**Examples of meta-thinking in action**

- How could I plan to do this?
- Have I done anything similar before?
- How did I do this last time?
- What approach could I use?
- What do I need to be able to do this?
- How can I check that I’m on the right track?
- What do I think and why do I think that?

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**Linking**

**There are six ACPs under the linking heading**

**Generalisation:** seeing what is happening and extrapolating it to similar situations.

**Connection finding:** thinking across topics, curriculum subjects and prior learning.

**Big picture thinking:** working with big, real world ideas.

**Abstraction:** applying ideas, problems or issues to theoretical situations.

**Imagination:** applying prior knowledge to problem solving.

**Seeing alternative perspectives:** being open to alternative ideas, ready to question assumptions.

**Examples of linking in action**

- I remember when...
- What does this remind me of?
- What is similar to/different to a previous event?
- Do I think something I saw elsewhere might work this time? Why?
- What would happen if...?
- Could I look at this from a different angle?

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**Analysing**

**There are three ACPs under the analysing heading**

**Critical or logical thinking:** the ability to hypothesise and to analyse and synthesise evidence.

**Precision:** using the right rules in the right context.

**Multi step/complex problem solving:** the ability to break down a task and use a broad range of appropriate strategies.

**Examples of analysing in action**

- Let me think again.
- I want to take a closer look...
- Am I sure this is right?
- Why do I think...?
- Is there another way to do this?
HPL in action at the Junior School

Year 5

In the Spring Term, Year 5 pupils have been focusing on their Africa topic. Miss Edie Stuart explains how pupils are getting to grips with the different ACPs.

We talk often about the ACPs and at the beginning of a recent topic lesson one of our pupils helpfully recalled the five ACP animals for the rest of the class to make sure everyone is becoming familiar with them. Then, throughout the session, every time the girls showed signs of adopting one of the ACPs they earned a House Point and a matching ACP animal sticker.

Sadie P. and Keira L. both gave a speech ‘for the UN’ on whether Ethiopia should build a dam on the River Nile – an activity which requires analysis; both were excellent and so received an Octavia Owl sticker each. Ela G. gained an Astrid Ant sticker for her argument in support of why Ethiopia should own the River Nile, as a result of linking to her background knowledge to come up with her argument.

The class was then asked to work in small groups to learn about the different countries in Africa and, when the class came back together, they could name nearly 40 of the 54 countries within the continent. One pupil showed her enquiry (one of the VAAs) skills by asking “If Africa is a continent with lots of different countries, why isn’t Great Britain a continent as it has more than one country?”.

Year 2

Year 2 pupils have been ‘absorbing’ the ACPs into their Science lessons in the Spring Term. Mrs Kerry Owens explains how.

Before half term, the girls were asked to collect different types of paper, which they brought into class. When the girls gathered as a group they investigated two different types of kitchen paper, pondering the question “what are they used for?”, and using linking and analysing skills to work out what they already knew about the paper.

Once the girls discovered that the paper was to absorb water, they discussed, in groups, how they could carry out a test to see which kitchen paper was more resistant and durable when wet. Thinking creatively, they all decided that liquid should be involved, with one member of the class impressively suggesting that they should put the papers over small bowls, in order to see whether any water dripped through – an excellent example of meta-thinking in action.

The next stage of the investigation was for the girls to answer the question “how do we make the test fair?”. The feedback from this problem solving challenge was that the liquid should be the same, and the same amount should be put on each piece of paper. Once the girls had carried out the tests as fairly as they could, they all reached different conclusions, giving plenty of scope for further discussion, and influencing their next experiment.
Senior School
HPL progress report

At the Senior School teachers have been encouraged to begin focusing on any of the ACPs or VAAs that will be most beneficial to a particular group’s learning – whether through the topical content being covered, particular preparation for academic challenges such as examinations, essays or excursions, or a specific behaviour that requires further nurturing.

SPOTLIGHT ON: GEOGRAPHY
Miss Fleur Spore

In the Geography department we specifically decided to focus initially on the linking ACP. As part of this, we have trialled an exercise with GCSE students to prompt them to link not only their ideas and concepts within a particular topic but to, in turn, link these to the development of geographical skills too. This is beneficial because students too often just ‘do the maths’ without seeing the value of what ‘the maths’ has proved or disproved, and what else this might enable. In students’ minds, the content and skills are often completely separate ideas (especially as they are examined in two separate papers), but clearly in life beyond school the use of knowledge and skills will become much more joined up!

The group was provided with various indicators of countries’ development, printed randomly on a sheet, and was asked to link ideas and information with annotated arrows. For example, statistics for life expectancy would feature as an indicator of development because in Advanced Countries it will be longer than in Low Income Developing Countries (LIDCs). The girls were also given information about the percentage of people who have secondary level education, the rate of infant mortality, the number of patients per doctor, the birth rate and death rate, access to vaccinations, number of calories consumed, diet, and so on.

Instead of just identifying which pieces of information might be linked with an arrow – for instance showing a relationship between high infant mortality, high death rate, lack of vaccinations, high number of patients per doctor and a short life expectancy – the students were asked to draw a correlation graph to show whether these linked factors were positive – for instance, as vaccinations increase, infant mortality decreases; or as patients per doctor goes down, life expectancy increases.

This combination of correlation graphs, and the accompanying explanations to annotate the links between the factors, worked really well and certainly started the students thinking about how the linking of these different ‘facts’, and also the linking of different presentation skills, enabled them to become more familiar with positive and negative correlations.

SPOTLIGHT ON: ART
Ms Susan Conroy

Within Art and Photography many of the assessment objectives designed by the exam board have strong links, and connect with the HPL ACPs. We have worked on correlating the ACPs with the exam board’s marking matrix to develop a curriculum that benefits the assessment criteria and, perhaps most importantly, gives our students a broad and balanced experience.

Over a series of eight lessons our Lower Sixth students have been producing a canvas painting based on the theme ‘Luminous and Obscured’. The girls have studied the traditional constructs, mediums and techniques used to develop landscape painting, analysing their function and form. They have applied what they have learned to developing a painting that breaks these functions in some senses.

The girls have used non-traditional materials, but in a traditional composition and learnt to take risks in applying unusual mediums such as bitumen, tile cement, emulsion, Indian ink and brusho dye to their work. They learnt that these non-traditional mediums can be applied in a traditional format if they learn to control, manipulate and refine them.

The intention was to allow these students to see that artists can use whatever medium they want to generate artwork and that, if they learn the rules, they can bend and even break them to create valid new forms.
After a few weeks teachers can flick through students’ work and immediately see whether they have been a systematic contributor or whether they still have a way to go.

Method 1: use a plotting compass to carefully plot points around a bar magnet. This is more time consuming, but more reliable and results in a permanent record.

Method 2: use iron filings shaken over a bar magnet to reveal the field lines of the magnet. This is quicker and allows for multiple magnet configurations to be used, but produces no permanent record and can be messy.

Pleasingly, most students attempted both methods during the course of the lesson, promoting them to think flexibly as they altered their approach between methods, even though the end result was the same.

One student, Lily O’B., extended this by combining the two methods, using the plotting compass and pencil to produce a field diagram and then adding iron filings on top, confirming that her drawings were correct. I thought this was an excellent example of creative flexible thinking allowing her to generate her own ideas, which then inspired others in the class to do the same.

In Textiles we see each page of the girls’ portfolios as a new challenge, which links with our original theme, for instance in the Spring Term we have been studying texture. The girls learn to present their work in original ways and at the same time learn how to use a variety of art media, techniques and processes to record this. Through their explorations they can create new ideas and come up with solutions that others have not seen. Collaboration (one of the VAs) and sharing of ideas is essential for the creative process too.

When students leave education to take creative roles in industry they will benefit immensely from experiences of sharing ideas with peers and building on the best of each other’s ideas! As the creative process evolves they can start to model a range of new and unique ideas and become more confident in suggesting how ideas can be improved by reflecting on ongoing work and by refining ideas through evaluations.
In PE and games we are lucky that the core concepts of HPL are naturally embedded in what we do. The learning environments allow for constant, immediate feedback to occur. As the girls are continuously practising their skills either in isolation, or within a game, they are constantly reviewing their own performances, or receiving feedback from us, as teachers. They receive immediate feedback about what has been successful and what needs to be changed and they can correct their mistakes and see progress within the lesson.

Once the girls receive feedback, they also then have the opportunity to develop resilience (one of the VAAs) and problem solving (analysing) techniques, quite independently from their teachers, to ensure the same situation doesn’t arise again.

As PE is a practical subject, HPL’s ACPs of meta-thinking, linking, analysing, creating and realising are rooted in the way the girls learn, and are demonstrated in the girls’ sports outcomes every week.

Some activities lend themselves more obviously to different ACPs, but we are trying to ensure students can discover the ACPs in every lesson, and every sport. Gymnastics and dance, for example, allow creating to be at the core of their focus. We are now asking students to think about where flexible and fluent thinking (creating), as well as evolutionary and revolutionary thinking (creating), are placed in team invasion games: undoubtedly there is a place.

As a department we have chosen to focus on analysing in the Spring Term. This is to continue to develop students’ independent learning and problem solving (analysing) skills by giving them the tools and confidence to break down a task, decide on a suitable approach, and then act accordingly. Being critical when analysing their own performance, and their peers’, is also something the girls are continuing to develop. We often question them on why their team was not as successful as the opposition or vice versa, and ask them what they think they could have done tactically to gain an attacking advantage, or how they could improve their individual skills. We then see whether the girls reapply that principle in the lesson. It is the ability to be critical of themselves, to rationalise this within the environment, while also maintaining confidence, that allows true high performance to be demonstrated.

The girls often demonstrate high performance learning without realising they are doing so, and it is our job, as PE teachers, to reinforce to them how and why they have been able to achieve such high standards.
SPOTLIGHT ON: BIOLOGY

Miss Vicky Handley

Our Year 8 biologists have been becoming more familiar with the HPL VAAs during the Spring Term, undertaking a project researching famous female scientists. They are devising a biography on their chosen scientist, looking at their career, what they studied at school or university, previous jobs, what their other achievements might have been outside of science, their family, and also what characteristics they might have had – linking the HPL VAAs to parts of the scientists’ lives and achievements.

They were asked to consider how their chosen female scientist showed the following characteristics within their life, identify things they did, or provide evidence for each characteristic using the VAA definitions: empathy, including being collaborative, concerned for society, and confident; agile, including being enquiring, creative and enterprising, open minded, and risk taking; hard working, having practised, and shown perseverance and resilience.

The girls are really enjoying the project and especially that they can research an area of science that they particularly enjoy or want to find out more about. Linking the female scientists’ success stories to their VAAs is a useful way to showcase why these VAAs are essential in achieving outstanding outcomes.

In History lessons Year 7 students have been examining pictures of the Abbey and shrine in St Albans, Hertfordshire, without any explanation of what was depicted in the pictures. Students were tasked with identifying what they would need to discover in order to learn more about the places pictured, such as what the purpose of the Abbey was, who lived there, when the shrine was built, and why it is significant. The girls also learnt about the life of monks and nuns before deciding whether they would like to lead such a life, the students overwhelmingly voted no, but one attribute that HPL encourages is the willingness to examine a range of alternative viewpoints, and so this was an opportunity to discuss in class the question of why so many people willingly chose to do so – from the role of the Church at the time to what life outside of a monastery might have been like.

The students travelled to St Albans to take their learning about the influence of the Church in mediaeval times further. The Abbey is of great historical significance as the site of the shrine to St Alban, the first Englishman martyred for his Christian faith. The girls toured the Abbey and were given characters to play, from royalty and knights to rich merchants and poor peasants, and reflected upon the motives of their individual characters. On returning to school the students penned letters ‘as their characters’ explaining the importance of making a pilgrimage to the site. Ornate tiles decorate the floor of the Abbey and the girls also had the opportunity to make their own clay tile as a memento of the day. Once back at school students recognised how this physical application of historical knowledge would help to reinforce their learning.

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HPL myth-busting

With any new school-wide approach there is bound to be some element of mystery and misconception. While we hope that the contents of this issue of Accolade will showcase what HPL looks like in action in our school, we wanted to address some of the more common HPL myths directly too.

Myth: HPL is like ‘hot-housing’, focusing only upon high academic achievement

High Performance Learning helps students achieve highly but, unlike ‘hot-housing’ where the focus is upon improving examination results only for the most gifted students, HPL provides students with a toolkit of transferable thinking skills and attributes that empowers all students to achieve highly, regardless of their background or level of progress when they start at the school. HPL rejects the notion that only those students identified as ‘talented’ should have high aspirations and in this regard represents the exact opposite of ‘hot-housing’: far from only helping students to pass examinations, it gives them the skills needed to succeed both academically and socially, now and into their adult lives.

Myth: HPL is too complicated for my daughter

We used to believe that the human brain was like a sponge: that it soaked up knowledge but, when it was saturated, it became full and unable to absorb anything more. This thinking assumes that the brain does not change in size and that no more learning can take place past a particular point. Intelligent students, it was thought, simply had bigger brains, whilst those students who struggled did so because of the limited capacity of their brain to ‘soak up’ information. Simply put, you were either ‘smart’ at school or you were not. Neuroscientists reject this! They believe that the brain is like a muscle that can be strengthened and grown through regular stimulus. Indeed, the malleability or ‘plasticity’ of the brain is highest during adolescence, and this concept underpins HPL. Given the correct stimulus, all students, not only the so-called ‘gifted’, can improve their intelligence and perform at a high level.

Myth: emphasis on HPL’s thinking skills and high achievement will negatively affect the St Mary’s School, Cambridge nurturing environment

HPL does not only help students develop the way they think, nor does it only boost academic attainment. Attributes like self-confidence, collaborating effectively with other students, and caring about wider society are also vital elements of HPL. These attributes will teach students how to face challenges in a positive way and to not be scared of taking risks in their learning. Students will reflect upon how best to support their peers and to help those in society less fortunate than themselves. Our school is proud of our Christian ethos underpinned by our foundress Mary Ward’s characteristics, and HPL is entirely compatible with, and complementary to, this ethos.

Myth: HPL takes valuable time away from students’ learning and preparation for examinations

HPL is not taught separately from required examination content, nor is it a distinct course to be followed to the detriment of learning the core factual detail of a given subject. Instead, HPL gives students the questioning attitudes, perceptive approach and thinking skills that will help them enhance their learning across the curriculum. It teaches them to be resilient in the face of challenges, a necessary attribute when preparing for examinations, and helps them to reflect upon their own learning to identify their own strategies to improve progress. It will teach them to think critically, logically and holistically, applying what they have learned in all their subjects to help them improve. In this way HPL helps students to learn in a deeper and more sophisticated way. All of these skills and attributes will be of genuine benefit when students prepare for their examinations now and in the future.

Attributes like self-confidence, collaborating effectively with other students, and caring about wider society are also vital elements of HPL.

Myth: HPL is just another educational fad

HPL is not a fad, as it is a proven, pedagogy-led model that is based upon research undertaken by Professor Deborah Eyre. Professor Eyre has over 40 years of research experience in the educational field, with a special focus upon developing advanced cognitive performance. She has advised the UK government as well as educators in Hong Kong, Singapore, South Africa and the United States, on educational policy. The former director of the National Association for Gifted and Talented Youth, Professor Eyre’s research led her to believe that the kind of engaging and challenging education previously considered suitable only for the highest achievers should be accessible to all students. HPL is the culmination of Professor Eyre’s lifetime of research, publications and leadership in the field.
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