Chapter 1: The learner attributes in teaching and learning

Overview

The learner attributes are closely related to a wide range of educational ideas and approaches and cannot be considered in isolation. This chapter explores some of these and introduces some of the themes that are considered in more detail in later chapters.

Competencies

A great deal has been written about the 'skills' needed to flourish in the modern, global, interconnected world. The *Assessment and Teaching of 21st Century Skills* researchers (Griffin, McGaw & Care, 2012) group these skills into four categories (see Table 1). While it can be argued that these have always been central to education, there is no doubt that they have become more prominent in the global information age.

Competencies might be considered to be a broader and better description of these than 21st century skills. Competencies are closely related to the learner attributes and refer to specific patterns of behaviour that enable someone to perform a task at the required standard. Competencies can be defined as: 'combinations of knowledge, skills and attitudes, which facilitate the application of knowledge to real world contexts' (see Cook & Weaving, 2013). The OECD (2005) says that competency 'involves the ability to meet complex demands by drawing on and mobilising psychosocial resources (including skills and attitudes) in particular contexts'.

To communicate competently, for example, an individual needs to be both knowledgeable and skilled in the language being used. But this is not enough. Effective communication is likely to draw on other resources including practical IT skills and skilled habits including confidence, reflection, empathy and creativity. Critical thinking, creativity and problem-solving all occur in contexts that will require specific knowledge, skills and understanding. However, they also require a range of intra- and inter-personal skills, and an inclination to demonstrate them.

Table 1

Defining 21st century skills	
Categories	**21st century skills**
Ways of thinking	Creativity and innovation Critical thinking, problem-solving, decision-making Learning to learn, metacognition
Ways of working	Communication Collaboration
Tools for working	Information literacy ICT literacy
Living in the world	Citizenship – local and global Life and career Personal and social responsibility – including cultural awareness and competence

> " Ultimately, education is not what we do to our children. Rather, it is what we do with them, and for them, to bring out the best in each of them, so that they grow up to embrace the best of the human spirit – to strive to be better, to build deeper wells of character, and to contribute to society. "
>
> **Mr Heng Swee Keat**, Minister for Education, Singapore, 2013

The importance of socio-emotional skills / competencies in the learning process

Put very simply, learning happens when students think hard (Husbands, 2014), effectively mobilising a number of different mental processes and resources that are both cognitive (such as reasoning and memory) and socio-emotional (sometimes called non-cognitive skills).

As well as developing knowledge, skills and understanding, learning involves transforming behaviours and attitudes that underpin cognitive functioning, so that students have the inclination and the resources needed to demonstrate competence.

Kautz, Heckman, Diris, ter Weel and Borghans (2014) describe a number of 'non-cognitive skills': these include personal qualities such as perseverance, self-control, attentiveness, resilience to adversity, openness to experience, empathy and tolerance of diverse opinions. They say that these skills:

- predict life outcomes at least as well or better than traditional measures of cognition
- have positive and strong effects on educational attainment. They also help to improve workplace and life outcomes
- can be enhanced, and there are proven ways to do so.

The Cambridge learner attributes provide a cross-curricular language that can support the development of these broader skills and personal qualities. It is also important to note that these skills are particularly valued in higher education and the workplace. <u>Appendix 1</u> provides evidence of the attributes universities are looking for in undergraduates and considers core skills for employability.

Appropriate challenge

Constructivism, a well-established theory that explains how learning happens, has important implications for effective teaching and learning. Constructivism highlights the fact that learners construct their own understanding from their own experiences. Understanding cannot be transmitted from a person (or any resource) without the active engagement of the learner. The most important implication is that learning needs to engage and challenge the learner's thinking so that they are made to think hard. Every learner brings knowledge, understanding and learning habits to the learning process. These need to be recognised and positively challenged for learning to occur.

The concept of the proximal zone of development, introduced by Vygotsky (1978), is helpful in identifying the right level of challenge. The proximal zone of development describes the distance between what the learner can achieve working on their own and the level of their potential development when being guided by a skilled teacher [or peer]. Vygotsky pointed out that learning is optimised when students' thinking is extended beyond what they can easily manage on their own. Teachers have a responsibility to scaffold learning by challenging a student with carefully designed instruction and activities. These make the student think hard and challenge their existing understanding. Sometimes in learning environments expectations are too easy so learners are bored, or too hard so learners become frustrated and demoralised as the leap in understanding expected is too high.

Teachers are responsible for designing and delivering instruction and learning tasks that foster deep learning in the proximal zone of development. In order to achieve this, Hattie (2009) argues that teachers need to be activators not facilitators of learning. Skilled teachers understand where students are in their learning and then plan and implement appropriate activities and instruction to take them to the next level, constantly challenging student thinking.

Vygotsky's ideas are absolutely relevant to developing the learner attributes. Learners need to be made to think hard about what it means to be confident, responsible, reflective, innovative and engaged in all of the contexts of their learning in the school, within and beyond the classroom, so that their understanding of themselves as learners evolves. The concept of enjoying challenge is crucial. In the words of Mihaly Csikszentmihalyi (1990), p3:

'The best moments in our lives are not the passive, receptive, relaxing times… The best moments usually occur if a person's body or mind is stretched to its limits in a voluntary effort to accomplish something difficult and worthwhile.'

Critical thinking, creativity and the problem of transfer

Critical thinking, creativity and problem-solving relate to particular disciplines. History, science, mathematics and the arts, for example, should all develop the ability to think critically and creatively, and they do this in ways that are not easily transferable to other contexts. This is because the capacity to think critically and creatively is intertwined with knowledge and understanding of a discipline. The main reason for including academic disciplines in the curriculum is that they nurture powerful knowledge (see Young, 2013) with applications that are not easily acquired from everyday experience. Students learn to think competently and solve problems as mathematicians, scientists, historians and artists.

Critical thinking and problem-solving have general applications beyond particular disciplines, of course, and the school's role is to develop these more general competencies. In this sense critical thinking is the ability to identify, analyse and evaluate situations, ideas and information to come up with responses and solutions. Creativity is the ability to imagine new ways of solving problems, approaching challenges, answering questions or creating products.

Because it is not easy to transfer what is learned from one discipline to another, for students to become effective critical and creative thinkers in this general sense they need to be able to reflect on and apply approaches they learn in academic disciplines in an interdisciplinary way. Interdisciplinary approaches need to be based on rigorous disciplinary understanding. Teachers, backed by a supportive curriculum, can help make connections in students' minds between what they learn in one context and discipline and another.

Every student's self-image and learner attributes profile will vary from one context to the next. If a student struggles with mathematics, for example, they are probably not as confident, responsible, reflective, innovative or engaged in this area as they are in others. Helping students identify their passions and areas of strength can form the basis of reflection around why it is that they perform well in one area compared to another. Reflective practices can help them to understand themselves as learners across the curriculum, maximising their strengths and minimising weaknesses.

Intelligence

There are lots of definitions of intelligence. Narrow definitions focus on problem-solving and mental agility in specific analytical problem-solving tasks and are often associated with intelligence quotient (IQ-g) as a general measure.

In a broader sense, intelligence can be understood as a person's ability to adapt to an environment and learn quickly from experience, demonstrating effective problem-solving strategies in a variety of contexts. This broader interpretation recognises the importance of personal competencies and practical problem-solving abilities as well as specific analytical skills.

Robert Sternberg (2009) views intelligence as the ability to achieve goals in life by capitalising on strengths and compensating for weaknesses to effectively interact with different environments using analytical, creative and practical abilities. He points out that successful students in higher education, in life and in the workplace have original creative ideas and the reflective and management skills necessary to make the best of their abilities. Sternberg observed that most of the successful graduate students he worked with were not those with the highest grades but those that demonstrated practical intelligence combined with wisdom and creativity. Practical intelligence is the ability to get things done, to communicate well, collaborate and see a task through to completion. Sternberg argues that intelligence, wisdom and creativity are learnable and can be developed over time. They are forms of 'developing expertise'.

The concept of wisdom, highly valued by Sternberg, is very relevant to the learner attribute of being responsible. It goes beyond being knowledgeable, stressing the importance of using knowledge well to make good judgements.

Howard Gardner (1983) suggested that traditional concepts and measures of IQ fail to measure or explain cognitive abilities. He said that intelligences are in fact multiple. He originally posited the existence of seven intelligences (musical-rhythmic, visual-spatial, verbal-linguistic, logical-mathematical, bodily-kinaesthetic, interpersonal and intrapersonal). He added naturalistic in 1995. Daniel Goleman (1995) popularised the term 'emotional intelligence', referring to the ability to understand one's own and other people's emotions and modify one's behaviour appropriately. He pointed out how critical emotional intelligence is in leadership.

Critics of multiple and emotional intelligence theory say they are more appropriately labelled as aptitudes or abilities, and empirical support for non-IQ-g intelligences is contested. More significantly there have been a number of popular books published suggesting educational approaches derived from these theories are based on poor reasoning and lack of evidence. It does not follow for example, as Gardner acknowledges, that students need to be taught differently depending on their own intelligence profile. Multiple intelligences are not learning styles. Such approaches, which assume students have preferred styles (for example visual, audio, kinaesthetic), have been discredited (see for example Riener & Willingham, 2010).

While recognising these limitations there are very important implications of how intelligence is understood for developing the learner attributes in schools.

1. Inclusive education practices that recognise individual strengths, and stretch and support all students should be valued. It's helpful to have what is sometimes called a 'growth mindset' (see Dweck, 2006 and Deans for Impact, 2015): this is where students and teachers believe that performance can be improved for all through goal-directed hard work. Teachers often have expectations of how particular students are going to progress, which tends to become a self-fulfilling prophecy. Students are sensitive to their teachers' expectations (Muijs, Kyriakides, van der Werf, Creemers, Timperley & Earl, 2014). At worst, this can result in students underestimating their own potential and underachieving.

2. If schools want to give students a broad education, preparing them for life, Sternberg's perspective on intelligence as developing the expertise needed to perform well in different environments has important implications for practice. The global information age requires students to navigate lots of environments using a combination of analytical, creative and practical abilities. This raises questions about what to include in the curriculum. Cheng, for example (2002, see Resources section), argues that there are a number of 'contextualized multiple intelligences' that are increasingly important in the modern world and schools should focus on developing these. The implications for curriculum of developing a wide range of expertise are considered in Chapter 2. The learner attributes can support a wide range of interpretations and approaches that schools adopt.

The importance of emotion and engagement

The importance of emotions in learning, thinking and decision-making is becoming increasingly well understood due to developments in neuroscience. In the past, the assumption was that the emotional and rational parts of the brain were largely separate systems. Immordino-Yang and Damasio (2007) and Immordino-Yang (2016) suggest a very high level of interdependence between effective emotional and cognitive functioning: 'It is literally neurobiologically impossible to build memories, engage complex thoughts, or make meaningful decisions without emotion' (Immordino-Yang 2016, p.18).

Immordino-Yang (2016, pp. 36–40) introduces the concept of emotional thought. This means that emotional and cognitive processes interact to produce thought processes that affect learning and reasoning and underpin decision-making. Having an effective 'emotional rudder' is critical, particularly for students to be able to use knowledge effectively.

Because learners construct their own understanding of the world, bringing prior knowledge and learning habits to the learning process, it is a fact of human nature that we tend to internalise experiences we have based on our existing world view and emotional states. No two people will internalise an experience in the same way. Schools need to nurture emotional awareness by making emotions (as well as reason) an object of reflection and respecting the role emotions play in learning.

Implications for teachers and schools include creating a culture of learning in classrooms so students feel emotionally safe. It is well known that adolescents are particularly concerned about their social image. This needs to be recognised so that students learn to see making mistakes as a learning opportunity and not something to be feared. This is considered in Chapter 5.

The learner attribute of engagement is particularly important. We think more deeply about things that engage us. Fostering emotional engagement in lessons is a great way to help students understand the relevance of what they are learning to their lives. Students need time to engage deeply with concepts and material. An overcrowded curriculum can result in rushing through material without fully engaging with it. One reason teachers need to generate their own schemes of work and lessons plans (see the *Developing your School with Cambridge* guide, Chapter 4:

www.cambridgeinternational.org/teaching-and-learning/developing-your-school-with-cambridge/) is so they can make it engaging and relevant.

Our first case study is a good example of how a school department made learning engaging. It also illustrates how the school supported the development of all the learner attributes with one well-designed activity. The annual writing event helps to improve students' language skills – but that is only a part of its purpose. Students make a personal emotional connection to writers (they become engaged) and produce their own innovative creative response. They are encouraged to discuss ethics, demonstrating responsibility. Reflection is essential to the process, and developing confidence an inevitable outcome, reflected in the students' responses.

Case study 1:

Developing a community of confident and engaged learners at the United World College of South East Asia (UWCSEA)

When planning learning activities for students in the English department at UWCSEA (East Campus), Kate Levy, the Head of Faculty, and her team work hard to consider how students engage with concepts in the English curriculum and the 'real world'.

Each year Kate organises a fortnight-long writing event for students in grades 9 and 10. The 'Write Here' event exposes students to a range of writers, allowing them to hear their stories, their inspirations and their challenges. In this way students make a personal connection to real stories and the power of the pen.

Kate brings in writers from a variety of professions: novelists, speech writers, journalists and those in the marketing industry. They share their experiences of the writing process.

The event is an engaging way for students to:

- develop an understanding of what it means to tell a story responsibly and the ethical concerns that come with it

- ask questions about media representations of people, places, events, and sensitising students to how truths are constructed, and how bias, assumptions and attitudes are embedded in the content, style and structure of the article. The students meet and interview journalists in the parent body about their work

- explore the relationship between words and images through the school's photojournalist writer-in-residence

- consider the relationship between form and purpose. What story and ideas do they want to share, why, and which text type would serve this best?

Case study 1: continued

- consider the values, expectations and sensitivities of the intended audience

- engage in critical thinking. It is quite provocative to hear a photojournalist reveal that he finds photography limited and potentially dangerous as a storytelling tool. Or that same journalist reveal that he felt some sympathy for the Khmer Rouge commandant that he tracked down and helped to bring to justice. Or to meet a teacher-author who had to battle with their editor at every stage to say what they wanted in a book about Western and Asian parenting. Or to hear a spoken word poet (and former refugee and ex-con) reveal how a life of displacement and violence in the US penal system (he spent 18 months in solitary confinement) gave him his poetry.

Students listen intently and talk animatedly about the ideas and the concepts raised by the writers. Many of them make insightful connections between very different speakers. The students' brief is to interview the guests to uncover their stories and then to share those stories purposefully and responsibly.

This ensures high levels of engagement as students respond to issues or stories that they feel connected to. The readers of the students' work (**click here to see an example**) are an authentic audience: perhaps an article for the school publication with an audience of 11 000+, an open blog post or a letter to the Board of Governors. In this way students understand the responsibility of the writer and develop the confidence to communicate appropriate messages in appropriate forms to a wide range of audiences.

By sharing stories through writing, students help to build understanding and compassion in our community. However, through their writing they also build their confidence not only as writers, but as young people with a voice in the community.

The importance of diligent and deliberate practice

Students need goal-directed deliberate practice to develop and embed skills that will help them progress, improve their understanding and apply their knowledge. Deliberate practice focuses on specific areas of weakness or misunderstanding. 'Diligent' refers to the fact it is usually repetitive and involves hard work.

Nowadays, knowledge is freely available on the internet and computers can perform many skill based tasks. One dangerous and false argument is that students therefore do not need to learn content or practise basic skills. This is based on a misunderstanding of what competence is. Form and substance are both equally important. Pak Tee Ng (2016) points out that a master of the martial arts has both substance, developed by repeated diligent practice of basic skills, and the aptitude to apply these in creative and useful ways. The same analogy applies to musicians, scientists, mathematicians, historians, linguists, artists, sportspeople or experts in any field.

One critical role of assessment for learning in classrooms is to identify areas that require focus and deliberate practice that will help students, once they have mastered these, to progress onto the next stage. Often this requires breaking down complex tasks or expectations into smaller component parts and practising to improve these specifically.

One of the limitations of project or inquiry-based approaches, if they are overused or poorly designed, is that students can be asked to demonstrate complex skills without mastering the component skills that are required for competent performance first. The assumption is that these skills are best developed through 'authentic' learning activities that are as much like the desired end product as possible. This may not actually be a good way to develop component skills (see Christodoulou, 2016). This needs to be balanced with the fact that carefully designed project and inquiry work, as part of a broad-based teaching strategy, can support engagement and help students understand component areas that they need to target and improve through deliberate practice.

Critical thinking, creativity, communication and collaboration 'depend on complex reasoning as well as multiple low-level skills that first must be automated' (Abadzi, 2015, p. 35). The importance of the working memory as a bottleneck to processing power in learning and performance is well understood. When learners practise a task like mental arithmetic it becomes automatic and embedded in long-term memory, freeing up space in the working memory for more complex calculations. Longer and

complex chains of skills can only be effectively developed after smaller chains have been formed through practice. Students have limited working memory and this can be overwhelmed by tasks that are too cognitively demanding.

Knowledge is also a prerequisite for sophisticated analysis and understanding. Studying history, for example, should help students to become excellent historians who understand concepts like continuity and change, similarity and difference, cause and effect. This needs to be based on detailed subject knowledge. What that knowledge actually is will vary depending on culture and context. But factual knowledge matters. Acquiring it will help students to understand concepts and transfer their understanding to new contexts.

High-performing musicians and sportspeople understand why they repeatedly practise basic skills, and good schools have a strong expectation of goal directed deliberate practice based on a growth mindset in all disciplines. This is why deliberate and diligent practice, along with all approaches used to support learning, need to become a topic of reflection and discussion in schools.

It is important to note, of course, that the wrong sort of diligent practice, drilling students with what teachers or tutors perceive as the correct answers needed to do well in examinations, is counter-productive. It destroys confidence and engagement, does not teach students understanding of the discipline, is likely to produce worse examination results, and does not prepare students for life. It develops dependency rather than independence.

The importance of reflection in learning

Skilled reflection deepens understanding and permits students to apply their knowledge in new contexts. It is also at the heart of becoming a self-regulated, life-long learner. According to David Whitebread (2017), 'children developing self-regulatory abilities predict academic outcomes and emotional wellbeing more powerfully than any other aspect of children's development'. Chris Watkins (2010) argues that to develop students' self-regulatory abilities, to learn how to learn, schools need to have a learning rather than a performance orientation. This involves making 'learning an object of attention and reflection, in other words to make learning an object of learning'. When this is practised well, students also do better in high-stakes assessments.

The Education Endowment Foundation (EEF) is an independent research foundation in the United Kingdom that investigates the effectiveness of educational interventions. It has shown that metacognitive approaches (a term used to refer to a learner's ability to self-regulate their learning and learn how to learn; see Chapter 3), have consistently high levels of impact. Evidence suggests that the strategies and habits associated with learning how to learn can be particularly effective for low-achieving students. This is detailed in the Teaching & Learning Toolkit: **https://educationendowmentfoundation. org.uk/resources/teaching-learning-toolkit/meta-cognition-and-self-regulation**

John Hattie's *Visible learning: A synthesis of over 800 Meta-Analyses Relating to Achievement* (2009) presents similar findings to the EEF. Hattie stresses the importance of making students' thinking visible, both to the teacher and the student, as a critical process in developing students' understanding of the material being learned. Developing metacognitive awareness and control is identified as having a powerful effect on students' learning and their ability to become independent learners.

Experiential learning, reflective practice and 'challenge education'

Experiential learning engages learners through direct experience of authentic problems and challenges. It is supported by focused reflection as a means of developing skills, acquiring knowledge and developing positive attitudes. The idea is relevant to classrooms, co-curricular activities and service learning.

The extent to which a school engages with experiential learning will depend on its vision, context and culture. All schools should to be concerned with relating learning in classrooms to the students' broader experiences, making learning relevant and engaging. As argued earlier, teaching and learning needs to constantly challenge students' thinking. This will involve using a variety of approaches including: collaborative group work, investigations, fieldwork, projects and presentations in addition to direct instruction and diligent practice.

Practical work is very important in a number of disciplines. To really understand science, for example, students need to practise the scientific method. Practical skills, like any other set of skills, have their own developmental pathway. Actually doing and experiencing a scientific experiment cannot be adequately reproduced by watching one or reading about it in a textbook.

Good reflective practice is fundamental to experiential learning. Kolb (1984) created the cycle of experiential learning (see figure 1), which contains four elements. Concrete experience forms the basis for observation, analysis and reflection. These lead to a new theory or understanding which forms the basis for learning in the next cycle. The critical importance of reflection in learning is considered in detail in Chapter 3. The reflective cycle forms the basis of the Cambridge Professional Development programme for teachers.

Proponents of 'challenge education' advocate the value of taking students outside their comfort zone, requiring them to experience learning in the real world of their communities, the workplace, the wilderness. Being challenged can develop confidence, resilience, practical problem-solving abilities, teamwork and wisdom which aren't easily developed in classrooms. This is considered in detail in Chapter 6.
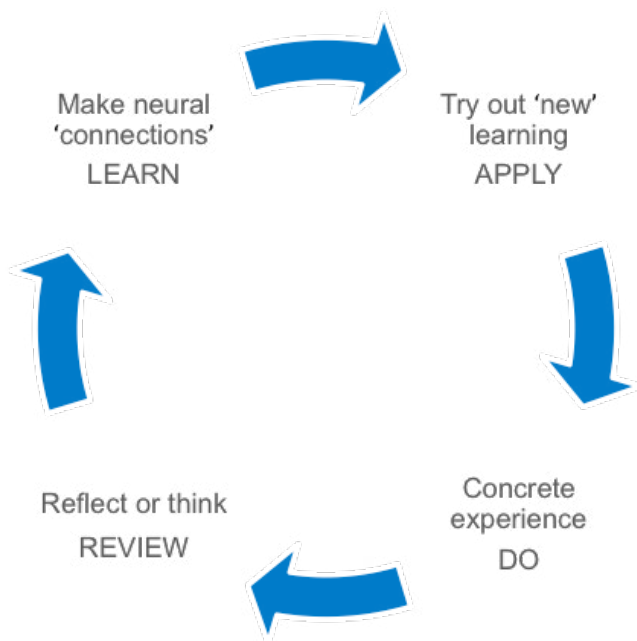

Figure 1: The reflective cycle adapted from Kolb (1984)

The importance of school culture

The educational programme in a school cannot meaningfully be viewed in isolation from the culture in which it operates. Culture creates the environment in which learning takes place and includes hidden and unintentional messages that may contradict the school's stated aims and objectives. Everyone involved in the school community – teachers, administrators, governors, students and parents – will have their own core values that determine how they think and act. These must be consistent with those of the school and supportive of the learner attributes.

Even if the school backs its mission with a clear strategy, it can be difficult to make progress without addressing culture. School culture is complex. Understanding and engaging with school culture is both an essential and often neglected part of school development. Culture operates on different levels. The most obvious is the surface level, which includes the visible aspects of pedagogy, curriculum and the overt behaviours of teachers, administrators and students. But schools also need to engage with deeper structures, including fundamental beliefs and value systems. Problems occur when deep values don't match surface appearances.

What are the implications?

- Curriculum is built on culture so it is in reality a local construct. No two schools are the same. All Cambridge International or any other external organisation can do is support you to develop your own.

- Culture is not easily changed. It is important to understand and respect what your culture is and work with it, gradually evolving practice rather than trying to enforce practices that are not fully understood or accepted.

- Evaluation is central. Are learners actually experiencing what you intend? If not, why not? Often the intended prescribed curriculum is different from the experienced curriculum.

- Recruitment of teachers, school leadership and governors is absolutely critical. A great deal of attention needs to be given to recruiting people who share the school's vision.

- Most learning happens outside the school, at home and in the wider community, so parental understanding and support for the school mission is crucial.

It is important to teach parents about the value of the learner attributes. In many schools parents are very results focused and might only be engaged with the learner attributes at a surface level. The learner attributes will be more effective when they are actively supported beyond the school by parents deeply committed to them. This guide is intended to help with this process by explaining why supporting the learner attributes will improve results as well as prepare students for life.

School culture is not static and it does change over time. Efforts to ensure that the culture is supportive will be rewarded with more effective practice.

Case study 2 is an illuminating example of how a school reflects on learning that brings together a number of ideas discussed in this chapter. The focus is on learning, and the school recognises that this will automatically lead to performance improvements. It concerns itself with cognitive and affective skills, knowledge, understanding and learning habits. Students are supported to become leaders of their own learning with the approach developing confidence, engagement and reflective practice for both learners and teachers. The desired outcomes are concrete in terms of improving Arabic language skills, and the school recognises the importance of culture, and that learning is different in every class and context.

Case study 2:

Doha College's Lesson Study* approach: High-performance learning in an international context.

How to revolutionise your ideas about learning and therefore change your teaching accordingly.

Watch the video at
https://vimeo.com/228214201

As part of the pioneering High Performance Learning (HPL) programme, launched by Professor Deborah Eyre, we reviewed our Lesson Study planning, observation and analysis cycles to gain a deeper understanding of how students learn, and, in particular, if and how students from different cultural backgrounds can be further supported to excel in their learning. We have subsequently adapted our pedagogy as we have engaged in an approach that is much more responsive to students' learning needs and therefore is a more harmonious learning process between the student and the teacher.

Lesson Study, first introduced in Japan in 1870, is an action research focusing on the development of teacher practice knowledge. The exclusive, non-judgemental focus on the learning processes aims to help us as teachers to challenge some of our misconceptions about how students actually learn. This teacher inquiry looked at students as having individual needs rather than as recipients of our teaching, and this encourages teachers to adapt their teaching to tune in much more accurately to the learner.

We were particularly interested how we, as teachers, can best embrace the notion of HPL. An HPL approach in school develops the cognitive skills and attitudes necessary for students to be successful not just academically but also in the wider aspects of their lives. Skills such as risk-taking, meta-thinking or intellectual curiosity are improved by developing their independence, confidence, ability to collaborate, deal with failure and perseverance, to name but a few

Case study 2: continued

qualities. We felt that by engaging in the observation of the learners, taking on board students' perception of their learning and acting upon it, we would gain an insight of how to best to empower our students to strive for excellence.

We chose a sequence of Arabic lessons to case study three students where we could observe a wide array of context. This included students with a range of social, linguistic and cultural prior knowledge and experience of the subject, as well as different learning styles, abilities, personalities and genders. We planned the research lessons collaboratively, then observed the learning (and not the teaching!), interviewed students about their learning experience and, finally, analysed the progress made. That research, data and student feedback then fed into the design of the subsequent lessons. We found ourselves refining our teaching approach to meet the actual requirements of students, rather than what we thought would work from the teacher's point of view.

The process was a remarkable experience for all the teachers involved, on many levels. Firstly, during the planning stage, we realised that as teachers we work in isolation so that our decisions, thinking and judgement processes are not a product of negotiation or compromise but are very subjective and one dimensional. Secondly, we have a pre-conceived idea of what teaching and learning should look like. Having completed team planning based on our 'knowledge' of students and 'half a century' of teaching experience, we watched 'our' lesson fall apart. We realised that so much of our focus is on ourselves and how we deliver material. Although we have incorporated support, assessment for learning and student feedback into our planning, we used it as a consequence to the learning, rather than enabling it to guide the learning itself.

Consequently, against our expectations, a semi-native Arabic speaker underperformed as he was not comfortable with the grouping (which derived, perhaps, from his social background) and, rather than leading the learning, he would only react when prompted. On the other hand, a student struggling with the

language felt reassured in a group composed of the opposite sex and performed excellently, displaying self-regulation and critical thinking. What surprised us the most was a high-performing student who reacted as predicted to the lesson but, in the interview, commented how unhappy she was with the timings which prevented her from analysing the topic in depth.

The whole process of the Lesson Study made us aware that to provide a truly personalised learning experience, where students strive to achieve the best they can, we need to positively embrace the fact that students are the leaders of their own learning and not us, or certainly not just us. As teachers, we were reminded that we too have to be constantly learning from the students in order to provide them with opportunities to succeed. The final case study lesson was much more in tune with the actual learning needs of the three case study students, who were now fully engaged in their learning. Thus, although the notion of 'knowing your audience' is an old one, we found the process tremendously valuable. Now back with our classes, we are continuing to question and examine our and students' approach to learning, making the experience continuously evolving and therefore better.

By Anna Davis

*See Resources: Pete Dudley: **http://lessonstudy.co.uk**

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