



the Money
Advice Service

Habit Formation and Learning in Young Children

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1.0 Introduction

Helping people to manage their money better is at the heart of the Money Advice Service business plan for 2013/14. To be able to do this we need to have a deep understanding of habits that can impact on financial capability later in life. This report aims to provide insight and ideas about how to prepare the next generation to manage their money. It will also form part of a wider research programme, into all aspects of financial capability.



Research shows children can ‘habituate’ effective processes and tendencies into their mental repertoire. These include inclinations to take responsible risks, to persist, to manage impulsivity or thinking ‘outside the box’. These underpin the development of the propensity within a child towards skilful action and effective decision-making in a variety of life settings.

This summary first explains the emergence of various cognitive and metacognitive processes within a young child. Then, we highlight the key ‘influencers’ in children’s habit-of-mind formation and how they have an effect, as revealed through the child’s externalised behaviours. The final section discusses how these mental processes and dispositions can be taught and practised, to become habitual ways of working towards thoughtful, purposeful and self-regulated action for facing the early challenges of life.

For further detail about any of the concepts referred to in this executive summary please see a copy of the full report, which will also be available online on the Money Advice Service website.

2.0 How do young children learn and develop?



Through the early years the child's knowledge base, their awareness & ability to control cognitive activity and ability to self-regulate grow and flourish. As the child learns to direct & monitor their learning, thinking & problem-solving abilities reliably and independently, they become "responsible" for their behaviour in significant ways, forming the foundation for further development. Specific tendencies or dispositions become habituated into the child's mental frame of reference, observable in their behaviours in approaching further activities.

2.1 Acquiring knowledge

A desire to understand their environment, to be in control of their own experiences and to make relationships with other children & adults, leads to the child amassing a bank of knowledge about the causes and effects of what they perceive around them within the first 4-5 years of life. They learn about their environment in two ways: imitation and inductive (or statistical) learning. Therefore, the modelling of behaviours by adults is a powerful means of supporting learning in children. Moreover, the propensity for inductive learning in young children also explains why learning from experience is more powerful than learning through instruction.

2.2 Controlling cognitive processes

The development of mental propensities and processes involves constructing a bank of knowledge, but also becoming able to use that knowledge appropriately to solve problems, reason and plan. Executive function faculties influence an individual's abilities to apply their knowledge in various situations, to control their cognitive, emotional and motivational processes, and learn intentionally. The most important basic executive functions: inhibition, attention flexibility and working memory are vital to children developing metacognitive and self-regulatory abilities which enable them to become effective learners. Research suggests a marked increase in the child's ability to co-ordinate inhibition and activation, and to attend flexibly during the age period from 3 to 5 years. Likewise, the ability to hold information in mind over a time delay develops very early (before 6 months); children gradually become able to hold more items in mind and for longer periods of time throughout the preschool years.

2.3 Understanding how learning occurs: metacognition

Early learning is not a single phenomenon or skill, but involves a group of practices which enable the child to become a more effective learner. This process is called metacognition. It encompasses the capacities to monitor, assess, control and change how to think and learn. Throughout early development, as mental habits of mind and consequent behaviours are being formed, accumulated metacognitive knowledge from previous metacognitive experiences lead to increasingly efficient performance. It also ensures cognitive effort on an activity is smoothly co-ordinated, automatic and efficient, as it becomes familiar and practised (see figure 1 for an explanation of the processes involved).

2.4 Language and Learning

Language is vital when learning takes place. It starts as a tool for social interaction. Around 3 years of age, the child begins to guide their own behaviour by using language in self-talk as a tool for “thinking out loud”. Self-talk continues as a tool of social interaction, used in the presence of others and diminishing when the child is alone. However, gradually it becomes a method for directing and regulating the child’s own behaviour. Around 7 years of age, their speech becomes internalised and transforms into thought, thus allowing for self-regulated conscious functioning on current tasks.

2.5 Motivation and Learning

Underpinning cognitive and metacognitive processes in a learning context is the child’s motivation and levels of self-confidence. The child’s beliefs about the intrinsic value of any learning activities they undertake, their feelings of competency as they approach the learning, their level of interest, and the activity’s relevance to them on a personal level are all factors influencing their motivation.

Figure 1: Understanding how learning occurs

<p>Building a knowledge base</p> <p>Children amass a bank of knowledge about the causes and effects of what is perceived in the environment</p>	<p>→</p> <p>Through processes of:-</p> <p>Imitation; observing and copying behaviours</p> <p>Induction/statistical learning: detecting patterns in real life experiences and constructing conceptual knowledge of the world</p>
<p>Controlling cognitive processes</p> <p>Children become able to apply knowledge in various situations, to control cognitive, emotional and motivational processes</p>	<p>→</p> <p>Through processes of :-</p> <p>Inhibition; the ability to restrain one's instinctive reactions</p> <p>Attentional flexibility; the ability to switch from one pattern of behaviour or method of working to another, applying ideas or rules in a flexible way</p> <p>Working memory; actively processing and restructuring information in relation to existing knowledge for use in other cognitive tasks such as reasoning & comprehension</p>
<p>Metacognition</p> <p>Children come to know about intellectual processes & understand the demands made by a specific learning task, in order to learn intentionally</p>	<p>→</p> <p>Through processes of:-</p> <p>Controlling; generating and applying strategies in order to cope with the task</p> <p>Monitoring; ongoing evaluation of the success of strategies implemented to cope with the task</p>

3.0 Who are the relevant influencers and what are their roles in developing children's behaviour?



Vygotsky's (1978) theoretical model of human development and learning, socio-constructivism, holds that development occurs through a process of engagement and participation in relationships with trusted others modelling psychological propensities & processes, and provides opportunities for practising them in real-life situations.

3.1 Parenting practices and parenting styles

Parenting practices and styles in relation to their children's activities in the early years have a powerful influence upon the child's development.

3.1.1 Parenting style can be seen as the emotional climate in which a child is raised and has been characterised by dimensions of parental responsiveness and 'demandingness' (Baumrind, 1971), which interact to produce four broad categories of parenting. The evidence consistently finds that the 'authoritative' parenting style is associated with a range of positive academic and well-being outcomes; early sensitive parenting is associated with children's higher competencies in regulating their cognitive functioning, their emotional behaviours and stress levels.

3.1.2 Parenting practices are affected by a range of factors, including socio-economic status (SES) which influences levels of parental involvement, monitoring and goals in relation to their child's development. Practices such as reading together and using complex language, as well as dispositions such as responsiveness and warmth in interactions are all associated with improved developmental outcomes. Evidence reveals that such practices and dispositions not only support the child to acquire skills directly, but also develop their motivation and disposition towards learning in general. Extensive research evidence has linked economic disadvantage to parental stress, low responsiveness in parent-child interactions and a range of poor cognitive and social-emotional outcomes in young

children, including adequate language acquisition, self-regulation, and confidence to interact or express their needs. Moreover, children from low-income or less educated families may be “doubly disadvantaged” since they are also less likely to be enrolled in early education settings.

3.2 Teacher influences

3.2.1 Teaching style can be seen as the socio-emotional climate engendered by the teacher in the classroom. The pupil-teacher relationship is important in promoting children’s academic success via classroom engagement as well as improved motivation. Teachers’ warm and positive relationships with their pupils encourage and reinforce appropriate self-regulatory behaviours that are important for learning. Early years teachers expect children to be able to increasingly regulate their frames of mind and behaviours appropriately in line with clear and conscious goals, or ‘classroom rules’. They are expected to delay, defer and accept changes without becoming aggressive or disorganised by frustration, and cope well with high arousal, whether due to environmental challenge or fatigue. As this socialisation proceeds, teachers begin to shift cognitive control to the child in age and skill appropriate ways; this competence requires emotion self-regulation and social knowledge, pre-dispositions and specific social skills. By the age of seven years, teachers require the child to exhibit increasingly sophisticated aspects of cognitive and social competence.

3.2.2 Teaching practices

Teachers can typically support the development of metacognitive and self-regulatory abilities in children by making learning strategies explicit, by encouraging children to reflect upon and talk about their learning and by supporting their new knowledge or skill acquisition through guiding and reinforcing the new learning. Key teaching practices include:-

- the clarity and pace of the instruction
- the amount of structure provided
- the amount of autonomy granted
- the teacher’s enthusiasm, humour and fairness.

3.3 Peer influences

Success in establishing friendships is a central issue in development during the early years period and depends upon a child’s ability to develop an attitude of negotiation and reciprocity, to regulate emotions and control behaviour appropriately in relation to the peer group. Children under the age of 7 years still frequently require adult assistance to inhibit impulses, solve social problems and to strengthen pro-social attitudes as well as accommodating peers’ individual differences, other children’s desires, suggestions or needs and to cope with frustration. By 3 to 4 years of age, the majority of both boys’ and girls’ social interactions are with members of the same gender and through the primary school years the proportion of same-gender peer preferences increases.

3.4 Media Influences

In the UK, in 1999, 63% of all children aged 2–18 years had a television in their bedroom, with substantial proportions of 2–4-year-olds (26%) and 5–7-year-olds (39%) spending an average of 2½ hours each day watching TV (Livingston & Bovill, 1999). It is likely that these percentages will have increased since 1999. Several studies have shown that high levels of childhood television viewing can contribute to the development of long lasting attention problems.

At the same time, despite huge investment, there is little evidence as yet of significant success in improving children’s educational outcomes through the use of digital technologies in schools (Luckin et al, Nesta, 2012).

3.5 Advertising

Due to their increased and increasing spending power, children and youth have become a valuable target market for advertisers; web sites and other forms of new-media content specifically designed for teens and children have burgeoned in recent years. Such influences can shape the young child’s perceptions of the world around them and influence their behaviours. Advertising research points to some key influencers in relation to young children’s understandings and choice-making behaviours.



4.0 What can parents/ caregivers and teachers do to encourage positive habits of self-regulation in young children and support their financial understanding?



Initially, young children will participate in practices alongside their parents, teachers and significant others without really understanding their bases. Yet, being essentially social learners, children will acquire cultural practices effortlessly and gradually assimilate “values, attitudes, standards, norms, knowledge, and behaviours that contribute to [their] financial viability and well-being” (Schuchardt et al. 2009, p. 86).

4.1 Parents

The most successful interventions aim to introduce or shape young children's financial behaviours take advantage of social and emotional motivations. For example, when a child first receives 'pocket money', or first deposits money in a money box, he or she is almost certainly being encouraged and guided by a significant adult (parent, grandparent) and it is the social and emotional motivations for interaction which instigate these behaviours. The enjoyment of doing something with the parent, the familiar habit of the weekly shopping trip or the feeling of becoming a 'grown up' by participating in activities like going to the bank, provide sufficient meaning and motive for young children to develop these habits.

- Research shows that children develop financial and economic understanding when they have “personal economic experiences”. The sources and amounts of money that children control influence their learning. Social context also shapes economic beliefs, attitudes, and values, leading to different levels of knowledge and financial behaviour.
- If parents support and model specific decision-making, children are likely to engage in the behaviour and potentially develop similar habits. In a wide-ranging review of financial socialisation in families, Rettig and Mortenson (1986) found evidence that children learn from observation, instruction, and practice.

4.2 Teaching in the early years classroom

4.2.1 Supporting self-regulation in learning

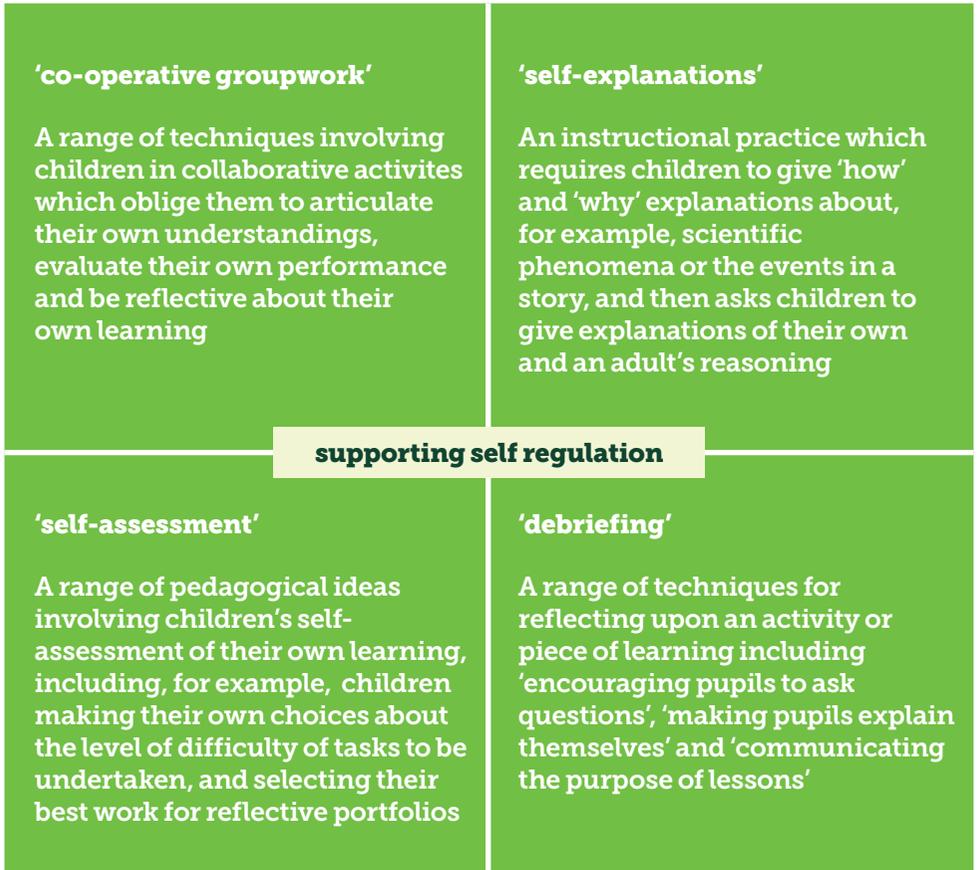
Teachers' expectations about children's capabilities are influential upon the way children self-regulate their learning, even from the earliest days. Specific teaching practices support the plausibility of improving self-regulation through relatively short-term interventions (see figure 2 for details on these techniques).



4.2.2 Interventions to foster executive function development in young children

Further, a series of specific interventions have been shown to support the development of executive functions in young children. Successful programmes tend to involve repeated practice and progressively increase the challenge to executive functions. The objective behind such interventions is to foster a child's creativity, adaptability, self-control, and self-discipline, not just for school learning, but for life-long learning, in which abilities will be required in all sorts of circumstances to 'think laterally', give a measured rather than an impulsive response, to persist and stay focused. A range of activities have been shown to improve children's executive functions: computerised training, non-computerised games, and specific school curricula.

Figure 2: Supporting self regulation



5.0 Conclusions



→ The evidence indicates that teaching young children explicit forms of ‘financial’ knowledge per se is likely to be ineffectual in shaping or changing their behaviours.

→ Since young children are dependent on parents and have few material goods or monetary resources that they control independently, methods used to form behaviours need to reflect real life situations to be effective.

→ Approaches, practices and skills which are modelled, discussed and demonstrated by parents and other significant adults, are most likely to be influential ‘levers’, supporting the development of efficient habits and practices.

→ Opportunities for parents and teachers to support a child’s capacities to defer gratification, to understand the ‘future’ in concrete terms, to talk about their understanding and new knowledge, all aid the development of a child’s self-regulation, and their ability to control and plan their behaviour.

→ Further, there are basic practical approaches and skills which can be modelled, discussed and demonstrated by parents and teachers with young children, such as the basic benefits and tools of sharing, saving, and purchasing that will support the development of efficient habits and practices. Such practices need to be constructed so that the child experiences the process or idea in tangible terms rather than just being told about it as an abstract concept.



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