

Executive summary

The aim of “personalising learning” is of growing prominence in thinking and policy discussions on education’s future and so is a natural component of CERI’s “Schooling for Tomorrow” programme. It springs from the awareness that “one-size-fits-all” approaches to school knowledge and organisation are ill-adapted both to individuals’ needs and to the knowledge society at large. But “personalisation” can mean many things and raises profound questions about the purposes and possibilities for education. The importance of airing these issues led to an international seminar – “Personalised Learning: the Future of Public Service Reform” – held in London in May 2004 bringing together the UK Department for Education and Skills (DfES), the think-tank *Demos*, and OECD/CERI. The key conference contributions have been elaborated into the chapters that make up this report.

The importance of the personalisation agenda

David Hopkins, who was a Chief Advisor to UK Ministers of Education at the time of the London conference, contributes the report’s Introduction. He identifies the foundations of personalisation to be partly historical and social – they importantly reflect people’s aspirations and their growing appetite for learning. But he particularly stresses as well the *moral purpose* that drives personalisation. This is seen vividly in conscientious teachers matching teaching to the individual learner, but also in the holistic nature of teachers as a profession working together to equip learners with the proficiency and confidence to pursue understanding for themselves.

Hopkins identifies in the current drive to personalisation the promise of addressing the longstanding constraints on reform and innovation: the limitations imposed by socio-economic variables; those of physical space, and the fact that teachers tend to be responsible for whole groups at any one time; the unsophisticated use of technology and the uniform pace of learning that has traditionally been demanded; the resiliently conservative nature of school organisation, and the step-by-step progression that virtually all children undertake; and the fact that teaching is still not an evidence-based profession.

Policy strategies to enhance the personalised learning agenda

David Miliband, UK Schools Standards Minister at the time of the London conference, presents his vision and policy agenda for personalisation of learning. He places personalisation in the context of “three great challenges”. These are: first, that of pursuing excellence and equality simultaneously and aggressively; second, how to combine flexibility in delivery with accountability for results; and third, meeting the demand that universal services should have a personal focus. In meeting these challenges, new synergies are needed that depend neither exclusively on market solutions nor on the planned approach.

He outlines five components of personalised learning to guide policy development. i) It needs to be based on detailed knowledge of the strengths and weaknesses of individual students. Hence it must build on assessment for learning and the use of data and dialogue to diagnose every student’s learning needs. ii) It calls for the development of the competence and confidence of each learner and so needs teaching and learning strategies that promote this. These include strategies which actively engage all students and which accommodate different speeds and styles of learning. iii) Personalisation means curriculum choice and respect for students, allowing for breadth of study and personal relevance, and clear pathways through the system. iv) Personalisation demands a radical approach to school and class organisation based around student progress. Workforce reform is a key factor, and the professionalism of teachers is best developed when they have a range of adults working with them to meet diverse student needs. v) Personalised learning means the community, local institutions and social services supporting schools to drive forward progress in the classroom. Miliband develops these elements with reference to concrete UK examples.

Building on research findings on learning

Sanna Järvelä, from Finland, reviews research evidence and clarifies key questions relating to personalisation. She distinguishes personalisation from individualisation, on the one hand, and from social learning, on the other, and instead sees it as an approach in educational policy and practice whereby every student matters, and is a route to equalising opportunities through fostering learning skills and motivation.

She examines seven critical dimensions:

- The *development of key skills* which are often domain-specific. Knowledge construction and knowledge sharing form the core processes

of learning; and these are connected to the development of higher-order knowledge and skills which are the key organisers for the construction and sharing processes.

- Levelling the educational playing field through the direct improvement of *students' learning skills*. This means teaching students how to analyse, critique, judge, compare and evaluate, and it may be extended to help students think wisely as well as to think well.
- Encouragement of learning through building *motivation*. Motivationally effective teachers make school meaningful cognitively, by enabling students to learn and understand, and motivationally by helping students appreciate its value, especially in potential applications for the knowledge outside school.
- *Collaborative knowledge-building* – new learning environments in education and the workplace are often based on shared expertise. Pedagogical models, tools and practices are being developed to support collaborative learning and reciprocal understanding. She reviews three elements: progressive enquiry, problem-based learning, and project-based learning.
- *New models of assessment* on which personalised learning is seen to depend, such as authentic assessment, direct assessment of performance and digital portfolios.
- Use of *technology* as a personal cognitive and social tool. For the personalisation agenda to succeed, she says, models are needed for the effective use of technology to support individual and social learning. It will call for multi-disciplinary collaboration between educational designers and technology developers and the full exploitation of mobile devices and wireless networks.
- *Teachers* are key: new learning environments require complex instructional designs and teachers will need to be strong in communication and collaboration. It is through them that the above areas will be mediated and promoted, including those of learning skills and new forms of assessment.

Brain research and learning over the life-cycle

Manfred Spitzer (Ulm, Germany) argues that brain research not only shows that we are born for learning and do it for our entire life, but also shows the conditions for successful learning and differences in each stage of

life. The time has come, he says, to use this understanding for shaping the learning environments and programmes; we can no longer afford to treat the most important resource that we have, our brain, as if we knew nothing about how it works. Thus, it is important to create the conditions for transferring insights from basic studies of learning in brain research to the practice of teaching.

His discussion is organised around a number of key themes where the burgeoning knowledge base about how the brain functions can inform education and the personalisation agenda. One regards the way young children are able to generate *rules from examples* and how this relates to neurological processes; for instance, when we learn single items (people, places, words, events) the hippocampus is the part of the brain most involved, in contrast with the cortex which is engaged in extracting rules. *Phases, stages and windows* discusses the maturation process and the ways in which the brain is able to come to complexity via the learning of more basic patterns and connections which are not then forgotten. The brain of the newborn contains practically all neurons but many are unconnected – learning is about creating connections between neurons and “maps” which, once consolidated, have important consequences for new learning. Learning for *a rapidly-changing world* can be understood through the acquisition of “meta-cognitive basic competencies” but neuroscience promises to give more precise understanding of the mechanisms involved and how practice-oriented learning takes place. *Emotions* and learning is a relatively new subject where neuroscience has insights to offer, especially the impact of negative emotions (fear, anxiety) on the ways in which learning takes place. Spitzze outlines the relative role played by the hippocampus and the amygdala under different emotional states and how this can affect the learning process. He also discusses *the life cycle* and slowing rates of learning (seen as something positive, even necessary), brain plasticity throughout the lifespan, and the ways in which experience and judgement improve with age.

The “personal” domain as a social construct – changing conceptions of childhood and youth

Yvonne Hébert and William J. Hartley take the example of Canada for changes which occur through societies, shaped by moral, socio-economic, political and legal influences. These include the appearance of a more liberal Christianity, the growth of industrial and agricultural productivity, the spread of literacy and the rise of the middle class, the greater emancipation of women, and enlarged notions of citizenship. Two particular processes – the advent of mass schooling and the post-war development of teenage youth culture in advertising and through the media – have been instrumental

in extending childhood and shaping youth. Among the different conceptions of childhood, one that runs through Canada's history is the notion of children and youth as consumers, producers, and commodities.

These sociological and historical perspectives are important in relation to the personalisation agenda. What counts as “personal” is not fixed but highly bound by cultural and historical factors. The possibilities to promote this agenda likewise are clearly influenced by such factors, and indeed they help to explain why this is emerging in some countries now as a policy priority. At the same time, educators are called upon to see beyond broad social representations of children and youth so as to support their strengths, legitimacy, diversity and vitality. Hence, there is need for sociological awareness while avoiding stereotypical images. Educational policy makers and researchers have a responsibility to understand conceptions of children and youth and to recognise the forces that shape them and young people must be recognised as whole.

Personalised learning in the broader social picture

Jean-Claude Ruano-Borbalan traces the history of ideas and knowledge about learning to discuss the issue of personalisation with particular reference to France. An original characteristic of recent centuries, he argues, has been the development of massive systems to codify and reproduce society and a marked feature of such systems has been the form of their schools, classes and lessons. This is “efficient” when it comes to social reproduction and socialisation into society's values but not in terms of knowledge acquisition, learning capacity, and autonomy. Hence, however convincing the case for personalisation may be from the viewpoint of learning and the individual, we need to recognise the extent to which it may conflict with profound, longstanding social process. It also runs up against the strength of beliefs held especially by teachers about traditional modes of knowledge transmission. Ruano-Borbalan believes that the progressive element of the personalisation agenda is less in evidence in France now than it was 20-30 years ago.

Nevertheless, he proposes that we are at a “second modernity”, borrowing a term from Giddens, with a gap between the dominant form of authority and knowledge transmission in the school system, on the one hand, and the scope for individuals to act and reflect, on the other. For modern societies, co-operation, networking and personalised learning are essential to economic and social development. Hence, the situation is one characterised by tensions. Because every human story is different, learning reflexes cannot be dictated and not by policy. But we can make a variety of activities and

knowledge available to learners, in a range of educational situations and then let them decide “on their own”, according to their preferences and personalities, how to progress and learn.

*Prospects for personalised learning,
from now to 2025*

Johan Peter Paludan from Denmark takes a futures orientation in this chapter to examine the elements that might lead the educational systems towards greater personalisation, namely, attitudes, motivation, the needs of society, and technological possibilities. In doing so, he warns against either underestimating the inertia of education systems or of overestimating their centrality for societies which now enjoy alternative routes to learning and knowledge. Nevertheless, lifelong learning itself presupposes a large degree of personalisation. Four scenarios are developed by combining two dimensions: economic growth (high to low) and culture (where the extremes are *laissez-faire* and tight control). This gives four scenarios: 1. *total personalisation* (high growth and *laissez-faire*); 2. *personalised timing* (high growth and tight control) 3. *automated teaching* (low growth and *laissez faire*) 4. *the status quo* (low growth and tightening control). He assumes that personalised education will not be possible without simultaneously improving the productivity of the system, especially in circumstances of low growth.

The chapter considers how key stakeholders – students, teachers, parents, the labour market, society – might react. The analysis takes a frank view both of how personalisation might be positive for each stakeholder, and why each group might resist radical change in this direction. Moves towards personalisation may also mean that it becomes more difficult to ascertain what individual students have gained from their studies and more discontinuous education may have negative effects on society’s cohesiveness. Personalisation characterised by easing the individual student’s passage through the system will be much less controversial than one that also personalises educational content. A key theme developed by Paludan, despite his own conviction of the merits of moving in this broad direction, is that of resistance to change in situations where clarity of outcomes and stakeholder interests are challenged by the personalisation agenda.

*The future of public services and
personalised learning*

Charles Leadbeater argues that personalisation has the potential to reorganise the way public goods and services are created and delivered. It assumes that learners should be actively engaged in setting their own targets,

devising their own learning plans and goals, choosing from among a range of different ways to learn. This chapter advances the discussion by exploring different concepts and approaches to personalisation, distinguishing between “shallow” and “deep” personalisation. The first is called *bespoke service*, where services are tailored to the needs of individual clients. The second approach outlined is called *mass customisation* in which users are allowed a degree of choice over how to mix and blend standard components to create learning programmes more suited to their goals. Third is *mass-personalisation*, based on participation and co-creation of value. Personalisation through participation allows users a more direct say in the way the service they use is designed, planned, delivered and evaluated. This involves the following steps: *intimate consultation*, *expanded choice*, *enhanced voice*, *partnership provision*, *advocacy*, *co-production*, and *funding*.

The context and the pressure for personalisation across a wide range of services is seen to be the chasm which has opened between people and large organisations, public and private. Hence, in education as in other sectors this agenda is seen as a way of reconnecting people to the institutions which serve them. As far as education is concerned, this implies far-reaching changes in the role of professionals and schools. But the biggest challenge is seen to be what it means for inequality: the more that services become personalised, the more that public resources will have to be skewed towards the least well-off.

*Identifying the right questions about
personalisation of learning and public
services*

Personalisation promises to overcome the uneven results of educational delivery and link innovation in the public sector to the broader transformations in OECD societies argue Tom Bentley and Riel Miller (at the time of the London conference of Demos and OECD respectively and its co-organisers). It is not purely a function of choice between alternative supply channels, but of shaping and combining different learning resources and sources of support around personal progression. Bentley and Miller discuss some familiar contrasts that can be re-cast by thorough-going personalisation. One is demand and supply, where the user (learner) may be directly involved in the design and creation of the learning experience. Another is public and private, where boundaries and the scope of each may be re-defined.

They describe entry points to system-wide change through different questions and issues. Universal? The first major challenge is to ensure that

personalisation is not dominated by the already better-off. Diverse? At the moment subject diversity is the most prominent aspect of agendas, but as more dimensions are drawn in, what should these be? Transparent? This is about the role of data and information but which should these be and how far should they extend beyond the framework of existing institutions? There is the nature of learning, especially as we move away from the view of ability as something fixed and largely given towards a much more active, dynamic concept. They look at learning beyond the classroom and the role of communities. They consider the reshaping of roles in the educational workforce, and the way that personalisation might reshape the organisational patterns of schooling and related agencies. And, they consider how more responsive and adaptive organisational systems will be needed.

The system-wide shift that personalisation could help to stimulate, they conclude, has the potential to be as profound as any transition that public education systems have undertaken before, but this requires both a compelling political narrative and a strategy for distributed change.