

Modern times

While education ministers constantly change syllabuses seemingly on a whim, they rarely address the core requirements to provide the skills needed by pupils to thrive in the 21st century. Dr Steffen Sommer reports

Even though we are only 14 years into the 21st century, educationalists around the globe, driven by employers and society at large, do not tire of the concept of 21st century skills. Where does this come from and what has changed in our perception of the role of education?

Nobody ever mentioned or identified the specific skills required in the 20th century, let alone made them a focal point for education. Perhaps they were not discernibly different from the skills traditionally imbued in our children in the process of learning, or the importance of skills was simply not recognised? Nowadays, we hone the subject, almost overemphasising it, possibly undermining the notion of subject knowledge, which hitherto has been at the nexus of education systems around the world.

Much change?

If we consider the layout and set-up of a typical classroom between 1955 and 1990, there isn't much of a difference. Tables were arranged in rows with a desk for the teacher at the front, looking at the class, with a blackboard, and later on whiteboard (to be replaced by electronic whiteboards in the early 2000s) behind the teacher for the class to look at, copy or receive instructions from. Students would have their text and exercise books as well as their writing equipment on their tables. While this set-up still has value for certain activities at particular times, we now know that it lends itself to a pedagogical approach that is didactic and teacher-centred and leaves little room for active learning on the part of the students.

With the arrival of the so-called knowledge-based society in 1991 (Trilling/Fadel, 2009), there was a shift in the value chain from an emphasis on the components of industrial production to information, knowledge and expertise as the main commodities. Without realising the magnitude of what was happening at the time when the internet started its conquest, we had arrived in the digital age. PCs, laptops and mobile devices became available in every household; newspapers and TV channels adapted to the new medium which changed the landscape, the way we find, process, understand and distribute information and, most importantly, how we learn and communicate.

The longer view

While it did not take long to recognise the potential impact of these changes on the future of education at

all levels (primary, secondary and tertiary), action did not keep up with the speed set by these developments. Indeed, education as it is delivered in schools is facing major challenges: the learning that now takes place at home, where digital media have become readily available, is generating a learning behaviour in children that is incompatible with the expectations in schools.

All disciplines, driven by technological advances and interlinked global communication, have started to move at an unprecedented pace, making knowledge ever-more ephemeral. At a time when the information contained in textbooks is likely to be out-of-date before publication, the traditional teacher-centred approach to educating children (as the preferred or one-and-only way) has become a liability. The fundamental function of any education system is to prepare the next generation for the needs of society. Given the increased unpredictability of those needs in the future, educationalists, the entire teaching profession at all stages, are faced with the urgent need of redefining its essence in order to remain in sync.

Skills first

Only when businesses around the globe started to bemoan the ostensible lack of skills, and the inadequacy of our children's preparedness for a more and more complex, fast-changing job market, did we start to focus on skills as a constant in education's future deliverables.

Wilhelm von Humboldt's model of a three-tier education (primary, secondary, tertiary) with an unchallenged focus on detailed up-to-date knowledge, which could be examined according to a set of norms at predefined stages, has stood the test of time in almost all European countries. So have the hierarchical responsibility structure (with a ministry at the helm) and a certain degree of uniformity commensurate with the power inherent in what is being taught to children.

The core academic disciplines were supposed to, and did, sow the seeds for the development of key skills at primary and secondary levels which could then be refined at the final stage, at university or while being trained for a job (apprenticeship). Given the culture of rivalry and the centralisation of power within European countries in Humboldt's days (early 19th century), there would naturally have been a certain paranoia regarding hierarchical decisions concerning education,

eg what is being taught to whom at what stage. Britain, unsurprisingly, was an exception. While there was as big a divide as elsewhere regarding access to education, and the quality thereof for the different strata in society, liberalism prevailed over hierarchy. Only in Britain, and the countries of the Commonwealth, would the education systems allow a diversification which goes beyond a denominational, gender or, later on, special school bias.

Good knowledge is a constant

While a good grasp of and confidence in subject knowledge have been, and will always be, important in all systems, it should not surprise us that it is independent schools and universities on the British Isles (Eton, Harrow, Winchester, Oxford, Cambridge, Durham etc), and their counterparts in the new world (Stanford, Yale, Princeton), whose beacon lights have not faded over time. Indeed, it is the prestige and achievements of those institutions that have been instrumental in defining the hallmark status which British and American educational institutions enjoy today.

Against the background of the Flashman experience in Tom Brown's School Days, we know that big-name institutions were not immune to problems and failings but the liberalism of the education provided has allowed, over time, an effective adaptation to the needs of the students in a certain place at a certain time. The students' ability to be actively involved in building their educational programme, the chance to choose according to strengths as well as the focus on a holistic education of which teaching in a classroom is a mere yet vital part, is well anchored in these rather less centralised systems, as is the focus on skills as an all-important constant.

Firmly embedded

The notion of transferrable skills has been present in A-level syllabuses since they came into being in the middle of the last century. Within the ubiquitous skills debate, they are now firmly embedded in academic discourse.

Closer links between ever-more overlapping disciplines and the urgent need for co-operation across neighbouring and seemingly more distant fields have given rise to a focus on an interdisciplinary approach to teaching and learning at all levels eg project work, EPQ, TOK, etc. To respond to the needs of the 21st century job market, cross-curricular activities should be the norm rather than the exception. While it is valuable to recognise the perimeter of a discipline, it is just as important to understand how it interlinks and interacts with others, and how skills learnt in one can be used within another.

Extrapolating from the developments outlined above, the tool kit (hard skills) for success in a fast-changing society should comprise adaptability, flexibility, the ability to communicate effectively across cultural and

linguistic barriers, as well as a readiness for lifelong learning and an acceptance of change as a constant. Against the background of an increased dependence on effective interaction, we should not underestimate the importance of soft skills (Jacquelin, 2013) in the cocktail of essential ingredients for success in the 21st century. These gelling agents are often described as interpersonal skills (empathy, interpersonal communication, negotiation, public speaking, leadership etc), but they also include intrapersonal skills (self-management of stress, time, emotions, goal-setting, decision-making etc) and intellectual skills (memorising, learning, analytical, problem-solving, rhetoric etc).

Each academic discipline has always delivered a set of specific skills which, in the 21st century, must no longer be an occasional addition to the process of knowledge transfer. Instead, it should be the fuel for an engaged, active learning process with the teacher as a guide and equal partner, preparing their subject knowledge to be acquired and understood by setting challenges, expecting errors and enabling teamwork for finding solutions.

This process will inevitably instil, in the next generation, the skills required to be successful leaders in a more and more sophisticated world (see Figure 1).

Figure 1



References:

- Trilling, B./Fadel, C. (2009). *21st Century Skills – Learning for Life in our times*, 3-5. John Wiley & Sons, Inc.
- Jacquelin, P. (2013). *Soft Skills. How we teach is what we teach. Talk at COBIS conference, Paris, February 2013, available online <http://delta-associates.org>.*



Dr Steffen Sommer is directeur général of Collège Champittet in Switzerland.