

# Executive Summary

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Countries and schools around the world are increasingly using four types of curriculum innovations: digital curriculum, personalised curriculum, cross-content and competency-based curriculum, and flexible curriculum. In doing so, the reality they face to date has been that such innovations may enlarge equity gaps among different groups of students, instead of closing the gaps. Thus, this report focuses on how curriculum can be adapted to ensure that no learner is left behind, particularly the most vulnerable and provides the opportunity to think harder about ‘equality, equity and inclusion in curriculum design and implementation’.

## **EQUALITY, EQUITY AND INCLUSION SHOULD BE MORE EXPLICITLY HIGHLIGHTED DURING CURRICULUM DESIGN AND IMPLEMENTATION PHASES.**

21<sup>st</sup> century curricula should be truly inclusive, leaving no learners left behind. Some countries focus on **equality**, i.e. offering equal opportunities to all students (e.g. minimum curriculum standards or a core curriculum). Others take an **equity**-focused approach, providing differential support for students based on their individual needs (e.g. remedial learning for students with difficulties). Some others embrace diversity and embed **inclusion** as the principle of curriculum design and implementation (e.g. removing systemic barriers to learning so that students can learn just as they are without any differential support).

Making conscious efforts to listen to **student voice** and ensuring their **learning and well-being** should be embedded into the process of curriculum design and implementation; this is in line with the United Nations Convention on the Rights of the Child, for example, Article 12 (respect for the views of the child), 24 (health and health services) and 28 (right to education).

Policy makers, curriculum designers and teachers can consider practical approaches for adapting curricula to all types of learners (including the most vulnerable ones). For example, **Design Thinking** pushes curriculum designers to thoroughly understand the challenges students face by empathising and listening to students and exploring problem space with various data and analysis, iteratively. **Universal Design for Learning (UDL)** invites curriculum designers to systematically find ways how a curriculum works for all, not only some learners, by focusing on removing barriers around the what (content and concepts), the why (sense of purpose and motivation), and the how of learning (pedagogies and assessment).

## **DIGITAL CURRICULUM IS PROVIDING US WITH MYRIAD NEW OPPORTUNITIES FOR HUMAN ADVANCEMENT, WHILE AT THE SAME TIME ENLARGING EQUITY GAPS WITHOUT CONSCIOUS EFFORTS TO BRIDGE THEM.**

*Digital curriculum refers to digitalisation of curricula to support all students to achieve their educational goals. In addition to digital content, it can include organisational features and formats used to articulate curricular content, such as e textbooks, online materials and repositories, and technological tools to deliver the curriculum, including both hardware and applications such as YouTube, artificial intelligence (AI), and digital platforms. The definition varies across countries/jurisdictions, and is evolving as schools experiment with a greater number of digital applications.*

A digital curriculum can help reducing equity gaps by, e.g.:

- allowing students to continue learning outside school or in remote and rural areas (e.g. students being in hospital for their health reasons, dropout students learning from home, students in refugee camps) as long as access to devices and internet connection is ensured;
- supporting students to continue learning during natural disasters or pandemics (e.g. during school closures due to the Covid-19 pandemic in 2020/21);
- removing some barriers for students with physical disabilities with assistive technology;
- motivating students who seem disengaged in learning with the use of games and interactive tools;
- enabling immigrant students to benefit from more access to digital dictionaries and translated learning materials;
- supporting students who are struggling in learning by providing ‘real-time’ feedback through AI tutors alongside with their teachers, so that they can make progress at their own pace, based on their prior knowledge, ability levels and learning needs.

Despite many advantages, a digital curriculum entails potential risks.

- false dichotomy between the use of AI and the human intrinsic values, which should be the core values of curriculum design and implementation; students and teachers should benefit from using a digital curriculum, not being deprived of opportunities or space to exercise their own agency;
- trade-offs with other needs (e.g. sufficient face-to-face interactions with teachers and peers, protection from privacy threats, and health-related risks associated with excessive screen time, altered sleep cycles, reduced physical activity level and feelings of social isolation, depression and anxiety);
- disparities in the use of a digital curriculum (e.g. issues with access to software, hardware and internet connectivity as well as a basic level of digital literacy for teachers and students);
- growing inequalities in home learning and well-being environment, associated with increased discrepancies in students learning as well as wellbeing outcomes.

To face such challenges, countries invest in bridging gaps in various areas, e.g. supporting teachers and students to appreciate human values as well as new opportunities brought by digital transformation; ensuring equitable access to infrastructure (e.g. digital devices, use of e textbooks, print materials, online platforms); supporting parents to ensure good learning and well-being environment at home. As the pandemic Covid 19 crisis revealed, attention needs to be given not only to observable gaps (e.g. lack of computers or limited internet), but also to more silent and hard to observe gaps (e.g. gaps in motivation by students who may quietly disengage and drop out when receiving only online instruction).

Adopting a digital curriculum may also entail new opportunities and challenges for public-private partnerships. For example, some governments set standards for new education services such as EdTech, or relax regulations in the existing industries, where appropriate. The typical trends include, for example, publishers develop e textbooks and software companies develop new learning management systems and/or learning apps. The introduction of private partners into the curriculum delivery process may raise other dilemmas, such as the dependency on specific digital services providers or escalating costs after trial versions of services expire.

### **PERSONALISED CURRICULUM IS NOT NEW, BUT IT IS GAINING TRACTION, ACCELERATED BY DIGITAL CURRICULUM, ALLOWING MORE PERSONALISATION TO SUIT VARYING STUDENTS' NEEDS.**

*Personalised curriculum, also known as individualised curriculum, differentiated curriculum or tailored curriculum, refers to an approach that offers individualised instruction to students. Personalised learning has many definitions and connotations, but its main purpose is to contribute to equity and inclusion by tailoring instruction to students' individual needs, skills and interests. Although personalised curriculum is not necessarily technology-based, current approaches do make use of technology.*

Traditional curriculum is often designed for teachers to teach the same content to all students at the same time and through the same instruction. This approach has been challenging in particular for vulnerable learners, overlooking the differences in proficiency levels, prior knowledge and skills, as well as learning needs and strategies. A personalised curriculum, if implemented properly, has the potential to change the curriculum structure from a one-size-fits-all, linear learning-progression model to a differentiated, non linear learning-trajectory model, from

which all students can benefit. A personalised curriculum allows students some degree of choice in content, pace of learning, and learning activities, and assessment. For example, assessment can be tailored to support students to set their individual learning goals, to provide more frequent and substantive feedback on progress and to diagnose potential learning difficulties. This approach enables them to become aware of their personal interests and their talents, to make sense of why they learn, and to make connections between school life and their own social and cultural environment.

One of the challenges of this approach is retaining rigor and coherence so as to avoid stigmatisation that this curriculum is a second class (often associated with lower parental aspirations or teacher biases). Another example is ensuring accountability for national or regional standards with the alignment of personalised curriculum content, pedagogies and assessment adapted to diverse groups of students (special needs, immigrant students, students at risk of drop-out). Other examples include managing costs, including direct and indirect costs associated with implementation of personalised curriculum; opportunity costs of teachers to ensure teacher well-being; supporting teacher agency so that they can design and manage personalised curricula for all students to grow in their own way.

To counter such challenges, some actions from policy makers include: integrating personalised learning in legislation and/or curriculum; provide targeted funds and technical support to schools; publish the curriculum and learning materials in multiple languages; supporting teachers and school leaders to design individualised study plans and syllabi; and involve additional stakeholders (e.g. parents, larger community), and make use of extracurriculum activities to support students at-risk.

### **CROSS-CURRICULAR CONTENT AND COMPETENCY-BASED CURRICULUM HOLD PROMISE FOR ENGAGING ALL STUDENTS NOT ONLY SOME, IF DESIGNED AND IMPLEMENTED PROPERLY.**

*It refers to curricula built across the boundaries of subject areas. Such a curriculum emphasises the importance of interdisciplinary knowledge and offers cross-curricular content to enable students to connect knowledge across different disciplines. Some generic competencies, such as critical thinking and creativity, are thought to be best developed through a cross-curricular approach to meet students' interests and needs, by helping students become responsive citizens in a technology-driven globalised world.*

This type of curriculum can contribute to equity by offering more engaging, practical, and demanding learning experiences for all students and, thus, empower them. It can help prepare students for civic life, good health and for the workforce. Vulnerable students, especially low-income and minority students, are likely to benefit from integrated learning and enquiry-based learning, e.g. learning science together with literacy, with argumentation and with knowledge construction; learning science and mathematics together in real-life settings and through collaboration among students. It is important to acknowledge that different pedagogies work for different students with different purposes; meta-analysis has shown that explicit teaching can be an effective instruction strategy when teaching critical thinking skills.

Cross-curricular content and competency-based curriculum should not imply a false dichotomy between content knowledge vs. competencies, but should instead value the development of competencies broadly speaking (knowledge, skills, attitudes and values) across learning areas. Similarly, it should not be seen as an equity measure targeting only certain groups of students, which invites stigmatisation. Unless it is designed properly, it can create more pressure to further curriculum overload. This curriculum type requires professional judgement and expertise of teachers to determine which type of teaching strategy works best for diverse students. Embedding equity-related values in curriculum as cross-curricular themes (e.g. inclusion, diversity, indigenous values) can also be a powerful tool for advancing the values of inclusion in schools and gives teachers and students opportunities to practice such values throughout their school day.

### **FLEXIBLE CURRICULUM CAN BE PARTICULARLY BENEFICIAL TO VULNERABLE STUDENTS WHILE COUNTERING THE RISKS OF DEEPENING LEARNING DIVIDES.**

*Flexible curriculum refers to the ability of schools and teachers to make local decisions about their curriculum. Flexible curricula allow schools and teachers a certain amount of freedom to make site-specific curricular choices on learning content and goals, pedagogy, assessment, and time and place of learning. For instance, when learning content intended in the curriculum, say sustainable development, teachers and students may choose to study in depth one environmental issue that deeply affects their local community (e.g. diversity of ocean life in coastal areas). A flexible curriculum welcomes such opportunities for contextualising learning.*

A flexible curriculum is similar to personalised curriculum in ways in which it allows students to learn differently, e.g. content, learning time, pedagogies, and assessment, in accordance with their needs. For example, flexibility in assessment (e.g. formative assessment) as well as time and place of learning (when coupled with a digital curriculum) hold promises for expanding access and improving the quality of learning for all, e.g. students learning from hospitals, remote areas, refugee camps, those abroad, etc.

Flexible curricula in content, however, may inadvertently have negative effects on students' performance and can even lead to increased equity gaps between groups of students. Other concerns include regional and local variations of how it is used as well as variations on investments in teaching and teachers, both of which may inadvertently increase equity gaps. To contain such risks some countries try to reserve flexible curriculum for specific groups of students, such as linguistic minorities and low-achieving students. Other countries encouraging schools to be flexible and proactive to support students from disadvantaged backgrounds, e.g. through the use of individual educational plans. Therefore, flexible curriculum is discussed in the context of curriculum autonomy, delegating responsibility for local entities to make informed decisions, being informed of the realities of the students.

### **ACROSS THE FOUR TYPES OF CURRICULUM INNOVATIONS, COUNTRIES HAVE GAINED INSIGHTS AND FIVE LESSONS LEARNED, DRAWING ON UNINTENDED CONSEQUENCES.**

When experimenting with various curriculum design and implementation strategies, countries and jurisdictions experience varying levels of success. Below are some of the lessons learned that emerged from real attempts at putting in practice some of these curriculum innovations in an effort to make them more inclusive:

1. Use Universal Design for Learning as checklist.
2. Change the paradigm of "learning and assessment" to favour the whole child and person development.
3. Expect both untapped opportunities and new risks in public-private partnership.
4. Avoid stigmatising personalised and cross-curricular content and competency-based curricula.
5. Do not underestimate the resources required to close observable and non-observable equity gaps.



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