

## Tarbiyat Institute education project 2030

This means at the k-12 level, schools will shift and heavily focus on skills acquisition as opposed to rote memorization and content “mastery.”

We are facing unprecedented challenges – social, economic, and environmental – driven by accelerating globalization and a faster rate of technological developments. At the same time, those forces are providing us with myriad new opportunities for human advancement. The future is uncertain, and we cannot predict it; but we need to be open and ready for it. The children entering education in 2023 will be young adults in 2030. Schools can prepare them for jobs that have not yet been created, for technologies that have not yet been invented, to solve problems that have not yet been anticipated. It will be a shared responsibility to seize opportunities and find solutions.

To navigate through such uncertainty, students will need to develop curiosity, imagination, resilience, and self-regulation; they will need to respect and appreciate the ideas, perspectives, and values of others; and they will need to cope with failure and rejection, and to move forward in the face of adversity. Their motivation will be more than getting a good job and a high income; they will also need to care about the well-being of their friends and families, their communities, and the planet.

Education can equip learners with agency and a sense of purpose, and the competencies they need, to shape their own lives and contribute to the lives of others. To find out how best to do so, Tarbiyat Institute has launched The Future of Education and Skills 2030 project. The aim of the project is to help find answers to two far-reaching questions:

- ❖ What knowledge, skills, attitudes, and values will today's students need to thrive and shape their world?
- ❖ How can instructional systems develop these knowledge, skills, attitudes, and values effectively?

Tarbiyat Institute offers a vision and some underpinning principles for the future of education systems. It is about orientation, not prescription. This is a work in progress, and we invite you to join us in developing future-ready education for all.

## Education 2030: A Shared Vision

We are committed to helping every learner develop as a whole person, fulfil his or her potential and help shape a shared future built on the well-being of individuals, communities, and the planet.

Children entering school in 2023 will need to abandon the notion that resources are limitless and are there to be exploited; they will need to value common prosperity, sustainability, and well-being. They will need to be responsible and empowered, placing collaboration above division, and sustainability above short-term gain.

In the face of an increasingly volatile, uncertain, complex, and ambiguous world, education can make a difference as to whether people embrace the challenges they are confronted with or whether they are defeated by them. And in an era characterized by a new explosion of scientific knowledge and a growing array of complex societal problems, it is appropriate that curricula should continue to evolve, perhaps in radical ways.

Need for new solutions in a rapidly changing world. Societies are changing rapidly and profoundly. The first challenge is the environmental: e.g.

- ❖ Climate change and the depletion of natural resources require urgent action and adaptation. A second challenge is economics: e.g.
- ❖ Scientific knowledge is creating new opportunities and solutions that can enrich our lives, while at the same time fueling disruptive waves of change in every sector. Unprecedented innovation in science and technology, especially in biotechnology and artificial intelligence, is raising fundamental questions about what it is to be human. It is time to create new economic, social, and institutional models that pursue better lives for all.
- ❖ Financial interdependence at local, national, and regional levels has created global value chains and a shared economy, but also pervasive uncertainty and exposure to economic risk and crises. Data is being created, used, and shared on a vast scale, holding out the promise of expansion, growth and improved efficiency while posing new problems of cyber security and privacy protection.
- ❖ A third challenge is social: e.g.
- ❖ As the global population continues to grow, migration, urbanization and increasing social and cultural diversity are reshaping countries and communities.
- ❖ In large parts of the world, inequalities in living standards and life chances are widening, while conflict, instability, and inertia, often intertwined with populist politics, are eroding trust and confidence in government itself. At the same time, the threats of war and terrorism are escalating.

These global trends are already affecting individual lives and may do so for decades to come. They have triggered a global debate that matters to every country and call for global and local solutions. The Tarbiyat Institute aims to ensure the sustainability of people, profit, planet, and peace, through partnership.

# Need for broader education goals: Individual and collective well-being.

Unless steered with a purpose, the rapid advance of science and technology may widen inequities, exacerbate social fragmentation, and accelerate resource depletion.

In the 21st century, that purpose has been increasingly defined in terms of well-being. But well-being involves more than access to material resources, such as income and wealth, jobs and earnings, and housing. It is also related to the quality of life, including health, civic engagement, social connections, education, security, life satisfaction and the environment. Equitable access to all of these underpins the concept of inclusive growth.

Education has a vital role to play in developing the knowledge, skills, attitudes, and values that enable people to contribute to and benefit from an inclusive and sustainable future. Learning to form clear and purposeful goals, work with others with different perspectives, find untapped opportunities and identify multiple solutions to big problems will be essential in the coming years. Education needs to aim to do more than prepare young people for the world of work; it needs to equip students with the skills they need to become active, responsible, and engaged citizens.

## Learner agency: Navigating through a complex and uncertain world.

Future-ready students need to exercise agency, in their own education and throughout life. Agency implies a sense of responsibility to participate in the world and, in so doing, to influence people, events and circumstances for the better. Agency requires the ability to frame a guiding purpose and identify actions to achieve a goal.

To help enable the agency, educators must not only recognize learners' individuality, but also acknowledge the wider set of relationships – with their teachers, peers, families, and communities – that influence their learning. A concept underlying the learning framework is “co-agency” – the interactive, mutually supportive relationships that help learners to progress towards their valued goals. In this context, everyone should be considered a learner, not only students but also teachers, school managers, parents, and communities.

Two factors help learners enable agency. The first is a personalized learning environment that supports and motivates each student to nurture his or her passions, make connections between different learning experiences and opportunities, and design their own learning projects and processes in collaboration with others. The second is building a solid foundation: literacy and numeracy remain crucial. In the era of

digital transformation and with the advent of big data, digital literacy and data literacy are becoming increasingly essential, as are physical health and mental well-being.

Need for a broad set of knowledge, skills, attitudes, and values in action.

Students who are best prepared for the future are change agents. They can have a positive impact on their surroundings, influence the future, understand others' intentions, actions, and feelings, and anticipate the short and long-term consequences of what they do.

The concept of competency implies more than just the acquisition of knowledge and skills; it involves the mobilization of knowledge, skills, attitudes, and values to meet complex demands. Future-ready students will need both broad and specialized knowledge. Disciplinary knowledge will continue to be important, as the raw material from which new knowledge is developed, together with the capacity to think across the boundaries of disciplines and “connect the dots”. Epistemic knowledge, or knowledge about the disciplines, such as knowing how to think like a mathematician, historian, or scientist, will also be significant, enabling students to extend their disciplinary knowledge. Procedural knowledge is acquired by understanding how something is done or made – the series of steps or actions taken to accomplish a goal. Some procedural knowledge is domain-specific, some transferable across domains. It typically develops through practical problem-solving, such as through design thinking and systems thinking.

Students will need to apply their knowledge in unknown and evolving circumstances. For this, they will need a broad range of skills, including cognitive and meta-cognitive skills (e.g., critical thinking, creative thinking, learning to learn and self-regulation); social and emotional skills (e.g., empathy, self-efficacy, and collaboration); and practical and physical skills (e.g., using new information and communication technology devices).

The use of this broader range of knowledge and skills will be mediated by attitudes and values (e.g., motivation, trust, respect for diversity and virtue). Attitudes and values can be observed at personal, local, societal, and global levels. While human life is enriched by the diversity of values and attitudes arising from different cultural perspectives and personality traits, there are some human values (e.g., respect for life and human dignity, and respect for the environment, to name two) that cannot be compromised.

Competencies to transform our society and shape our future.

If students are to play an active part in all dimensions of life, they will need to navigate through uncertainty, across a wide variety of contexts: in time (past, present, future), in social space (family, community, region, nation and world) and in digital space. They will also need to engage with the natural world, to appreciate its fragility, complexity, and value.

Building on the key issues Tarbiyat Institute has identified three further categories of competencies, the "Transformative Competencies", that together address the growing need for young people to be innovative, responsible, and aware:

1. Creating new value
2. Reconciling tensions and dilemmas
3. Taking responsibility

### Creating new value

New sources of growth are urgently needed to achieve stronger, more inclusive, and more sustainable development. Innovation can offer vital solutions, at affordable cost, to economic, social, and cultural dilemmas. Innovative economies are more productive, more resilient, more adaptable, and better able to support higher living standards.

To prepare for 2030, people should be able to think creatively, develop new products and services, new jobs, new processes and methods, new ways of thinking and living, new enterprises, new sectors, new business models and new social models. Increasingly, innovation springs not from individuals thinking and working alone, but through co-operation and collaboration with others to draw on existing knowledge to create new knowledge. The constructs that underpin competency include adaptability, creativity, curiosity, and open-mindedness.

### Reconciling tensions and dilemma

In a world characterized by inequities, the imperative to reconcile diverse perspectives and interests, in local settings with sometimes global implications, will require young people to become adept at handling tensions, dilemmas and trade-offs, for example, balancing equity and freedom, autonomy and community, innovation and continuity, and efficiency and the democratic process. Striking a balance between competing demands will rarely lead to either/or choice or even a single solution. Individuals will need to think in a more integrated way that avoids premature conclusions and recognizes interconnections. In a world of interdependency and conflict, people will successfully secure their own well-being and that of their families and their communities only by developing the capacity to understand the needs and desires of others.

To be prepared for the future, individuals must learn to think and act in a more integrated way, considering the interconnections and inter-relations between contradictory or incompatible ideas, logics, and positions, from both short- and long-term perspectives. In other words, they must learn to be systems thinkers.

## Taking responsibility

The third transformative competency is a prerequisite of the other two. Dealing with novelty, change, diversity, and ambiguity assumes that individuals can think for themselves and work with others. Equally, creativity and problem-solving require the capacity to consider the future consequences of one's actions, to evaluate risk and reward, and to accept accountability for the products of one's work. This suggests a sense of responsibility, and moral and intellectual maturity, with which a person can reflect upon and evaluate his or her actions considering his or her experiences, and personal and societal goals, what they have been taught and told, and what is right or wrong. Acting ethically implies asking questions related to norms, values, meanings, and limits, such as: What should I do? Was I right to do that? Where are the limits? Knowing the consequences of what I did, should I have done it? Central to this competency is the concept of self-regulation, which involves self-control, self-efficacy, responsibility, problem solving and adaptability. Advances in developmental neuroscience show that a second burst of brain plasticity takes place during adolescence, and that the brain regions and systems that are especially plastic are those implicated in the development of self-regulation. Adolescence can now be seen as a time not just of vulnerability but of opportunity for developing a sense of responsibility.

## Design principles for moving toward an eco-systemic change.

These transformative competencies are complex; each competency is intricately inter-related with the others. They are developmental in nature, and thus learnable.

The ability to develop competencies is itself something to be learned using a sequenced process of reflection, anticipation, and action. Reflective practice is the ability to take a critical stance when deciding, choosing, and acting, by stepping back from what is known or assumed and looking at a situation from other, different perspectives. Anticipation mobilizes cognitive skills, such as analytical or critical thinking, to foresee what may be needed in the future or how actions are taken today might have consequences for the future. Both reflection and anticipation are precursors to responsible actions.

The Tarbiyat institute therefore encapsulates a complex concept: the mobilization of knowledge, skills, attitudes, and values through a process of reflection, anticipation, and action, to develop the inter-related competencies needed to engage with the world.

To ensure that the new learning framework is actionable, the Tarbiyat Institute 2030 stakeholders have worked together to translate the transformative competencies and other key concepts into a set of specific constructs (e.g., creativity, critical thinking, responsibility, resilience, collaboration) so that teachers and school leaders can better incorporate them into curricula.

They have also built a knowledge base for curriculum redesign. Curriculum change assumes that education is an ecosystem with many stakeholders. Students, teachers, school leaders, parents, national and local policy makers, academic experts, unions, and social and business partners have worked as one to develop this project. In its work across different areas Tarbiyat institute has identified these points.

1. Confronted with the needs and requests of parents, universities and employers, schools are dealing with curriculum overload. As a result, students often lack sufficient time to master key disciplinary concepts or, in the interests of a balanced life, to nurture friendships, to sleep and to exercise. It is time to shift the focus of our students from "more hours for learning" to "quality learning time".

2. Curricula reforms suffer from time lags between recognition, decision making, implementation and impact. The gap between the intent of the curriculum and learning outcome is generally too wide.

3. Content must be of high quality if students are to engage in learning and acquire deeper understanding.

4. Curricula should ensure equity while innovating; all students, not just a select few, must benefit from social, economic, and technological changes.

5. Careful planning and alignment is critically important for effective implementation of reforms.

In response to these challenges, working group members and partners are co-creating "design principles" for changes in curricula and education systems that will be relevant in different areas over time.

Concept, content, and topic design:

- ❖ Student agency. The curriculum should be designed around students to motivate them and recognize their prior knowledge, skills, attitudes, and values.
- ❖ Rigor. Topics should be challenging and enable deep thinking and reflection.
- ❖ Focus. A relatively small number of topics should be introduced in each grade to ensure the depth and quality of students' learning. Topics may overlap to reinforce key concepts.
- ❖ Coherence. Topics should be sequenced to reflect the logic of the academic discipline or disciplines on which they draw, enabling progression from basic to more advanced concepts through stages and age levels.
- ❖ Alignment. The curriculum should be well-aligned with teaching and assessment practices. While the technologies to assess many of the desired outcomes do not yet exist, different assessment practices might be needed for different purposes. New assessment methods should be developed that value student outcomes and actions that cannot always be measured.
- ❖ Transferability. Higher priority should be given to knowledge, skills, attitudes, and values that can be learned in one context and transferred to others.
- ❖ Choice. Students should be offered a diverse range of topics and project options, and the opportunity to suggest their own topics and projects, with the support to make well-informed choices.

## Process design:

Teacher agency. Teachers should be empowered to use their professional knowledge, skills, and expertise to deliver the curriculum effectively.

- ❖ Authenticity. Learners should be able to link their learning experiences to the real world and have a sense of purpose in their learning. This requires interdisciplinary and collaborative learning alongside mastery of discipline-based knowledge.
- ❖ Inter-relation. Learners should be given opportunities to discover how a topic or concept can link and connect to other topics or concepts within and across disciplines, and with real life outside of school.
- ❖ Flexibility. The concept of "curriculum" should be developed from "predetermined and static" to "adaptable and dynamic". Schools and teachers should be able to update and align the curriculum to reflect evolving societal requirements as well as individual learning needs.
- ❖ Engagement. Teachers, students, and other relevant stakeholders should be involved early in the development of the curriculum, to ensure their ownership for implementation.

## Next steps

- ❖ This paper summarizes our effort for education change. You are invited to add your voice and your support to its visions and ideas by joining the Working Group of the Tarbiyat Institute Education 2030 project.
- ❖ The group is collecting ideas and examples of good practice for making the learning framework actionable. They call on:
  - ❖ National, regional, and local governments to share their policy design and curriculum design experiences related to the learning framework.
  - ❖ Students, teachers, school leaders, and parents to share practices and experiences as concrete.
  - ❖ Experts and researchers help strengthen the links between evidence-based policy and practice, especially on the constructs of the framework.
  - ❖ Local communities, professional associations, and industries.