

Futures of Education in Bangladesh

ENVISIONING 2041



FUTURE
EDUCATION.



Chief Coordinator

Anir Chowdhury, Policy Adviser, a2i

Executive Supervisor

Professor Faruque Ahmed, e-Learning Specialist, a2i

Md. Afzal Hossain Sarwar, Policy Specialist (Educational Innovation), a2i

Mohammad Rafiqul Islam Sujon, Educational Technology Expert, a2i

Editor

G M Rakibul Islam, Lecturer of Education, DSHE, Dhaka

Sabiha Sultana, Lecturer of Education, DSHE, Dhaka

Mohammad Sakhawat Hosain, Policy Expert, a2i

Futures Studies Expert and Research Consultant

Shakil Ahmed, Associate Director (Alumni Impact), Teach for Bangladesh

Designer

Redwan Hossain Shovon, Intern, a2i

Cover Photo

Arafat Karim, Freelance Designer,
Institute of Fine Arts, University of Dhaka

In Association with

Ministry of Education, Ministry of Primary & Mass Education, Ministry of Post
Telecommunication & Information Technology

Team Members

Mohammad Kabir Hossain, Associate Professor, Govt. TTC, Cumilla

Md. Ahsanul Arefin Chowdhury, Assistant Professor, Govt. TTC, Pabna

Md. Dulal Mia, Instructor, URC, Kuliarchar, Kishoregonj

Khan Md. Kamruzzaman Maruf, Instructor (General), PTI, Magura

Shahriar Shafiq, Instructor (General), PTI, Pirojpur

Shefat Islam, Attached Officer, a2i

Mehdi Hassan, Program Assistant, a2i

Junnatul Ferdosh Ani, Program Implementation Assistant, a2i

Avijit Saha, Young Professional, a2i

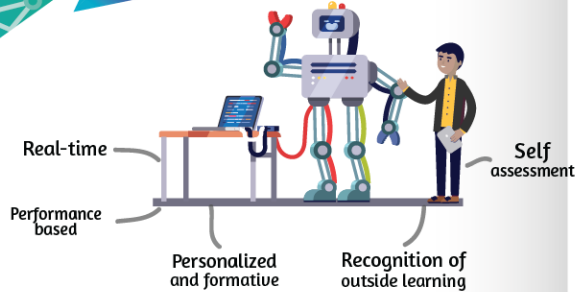
Jinia Jerin, Young Professional a2i

Participatory Organizations in the workshop:

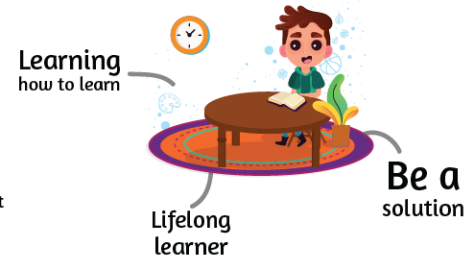
10 Minute School, Abinta Kabir Foundation, Agami Education Foundation, Alokito Hridoy Foundation, Bangladesh Exam Development Unit, Bangladesh University of Professionals, Bangladesh Youth Leadership Center, Bengal Institute, BRAC, BUET, CAMPE, Children Film Society, Directorate of Primary Education, Directorate of Secondary and Higher Education, Durbin Foundation, Duronto TV, Govt. TTC Dhaka, IER University of Dhaka, Jaago Foundation, Light of Hope, Math Olympiad, Ministry of Education, Ministry of Primary and Mass Education, NAEM, NCTB, Onnorokom Group, Plan International Bangladesh, Project Tiktalik, Sesame Workshop Bangladesh, SESIP, Teach for Bangladesh, Tech Academy, Technical and Vocational Education Board, TQISEP Project, UNESCO, UNICEF.

Future Education Plan

Assessment for Learning



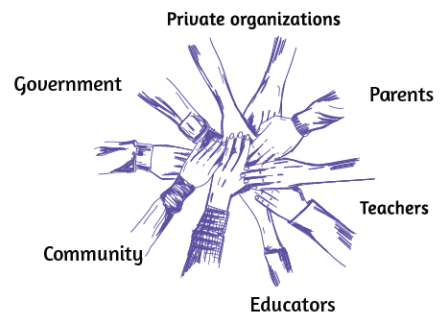
Self-adaptive Learner



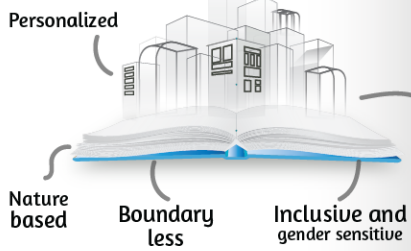
School as Solution Journey



Shared Responsibility for Quality Education



Open Learning Space



Inquiry, project & problem based learning

Executive Summary

a2i is a policy program of the Government of Bangladesh that catalyzes citizen-friendly public service innovations simplifying government and bringing it closer to people. a2i has identified education as one of its priority areas of work to develop future generation and to sustain this developed mindset of government institutions. a2i has been working to improve the quality of education integrating ICT and other innovative solutions for over a decade. Considering the emergence of 4th industrial revolution, a2i Education Team invited a range of stakeholders from the public and private sector that are part of the Bangladesh education ecosystem to co-create the preferred futures of education in Bangladesh through a series of workshops.

This publication aims to share some of the findings from the workshops, such as the preferred futures of the various components of the education ecosystem in Bangladesh. The publication also aims to display the journey from the preferred futures of education in Bangladesh to the present. The methodologies used in the workshops are largely adapted from the field of Futures Studies.

Given the findings of the workshops and upon further literature review, the a2i team has suggested that learners of Bangladesh in 2041 should have a **6CAP** competency profile. This means that learners are

Communicative, **C**ollaborative, **C**ritical thinkers (and problem solvers), **C**reative (and innovative), **G**lobal citizens (who are active), **C**hangemakers, **A**daptive and, **P**roductive (and proactive).

In order for learners to achieve such a profile, the futures of various aspects of education were explored during the workshops. This publication also showcases the futures of curriculum & pedagogy, policy, learning environments, educational resources, assessments, teachers, governance & partnerships, and educational research & innovation.



As next steps, a2i has proposed a series of projects and activities inspired from these futures. Various stakeholders have been contacted and need to be further contacted to collaborate in these projects. It is hoped that this report can act as a provocation for thought and further conversation required around the futures of education in Bangladesh. Feedback on the findings of this report and suggested projects are most welcome.



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Letter to The Reader

Dear Reader,

The purpose of this report is not to create a detailed blueprint for the future, but to spark the conversation regarding the futures of education in the year 2041. We do not intend to state or claim that the futures mentioned are the **only possible futures**, but these are some possible **preferred future**, based on the stakeholders consulted so far.

As you read the preferred future of each aspect of education, you will also notice that we have provided a possible pathway towards the preferred future in 2041. However, there can be more than one way through which a preferred future can be achieved and this should be kept in mind.

We have also provided a background and methodology section so that you can understand why this document was created and what are the methods used to elucidate some of the findings. Find out ways in which you can get involved at the end of the document.

If you do not understand any of the terms or acronyms mentioned in the document, we have also provided a

glossary at the end of the document for your benefit of understanding.

We envision that this document will be in constant evolution and can provoke conversations regarding the different aspects of education that have been highlighted.

As you read through the document, we even actively encourage you to think about what resonates with you and what's missing with regards to the preferred future in 2041 and ways in which we can all work together in achieving it.

Have fun exploring the future,

Regards, the a2i Team

Would you like to share your thoughts?

You can reach us at Education@a2i.gov.bd





BACKGROUND

“

Education is the passport to the future, for tomorrow belongs to those who prepare for it today.

- Malcolm X

“

“Any useful idea about the future should appear to be ridiculous.”

- Jim Dator

What will Bangladesh look like in 23 years from now? What will the world look like after **2041**?
If nothing changes and contexts remain as they are, what will be the future of Bangladesh?

If we look at Bangladesh's development success and its stable, positive economic growth rate, we may predict a positive future in store, whereas if we look at rapid urbanization, pollution and climate change, we may predict a dismal future. There are two things to point out here. Firstly, the notion of the default future - if things remain as they are, then what will the future be like? Secondly, there is not one singular future - there are futures and multiple possibilities of them. Among all these possibilities, which futures are probable?

For example, the future of Dhaka could be one where it is polluted and full of roads and private cars or it could be a green Dhaka with a lot of public spaces, with developed public transport systems. Either future is possible, but which one is more likely to happen?

However, what is most important to ask in the context of nation building, which of these futures are preferred? ***What futures do we want for Bangladesh in 2041?*** How do we gain the agency to work towards the futures that we want for Bangladesh?

Education, which consists of systems through which people learn and is instrumental in shaping the development and sustainability of a nation, inevitably comes into the picture. Of course, it is not the case that a country develops only through improving its education, but education systems are nonetheless foundational in this pursuit.

While Bangladesh has made progress in providing children with access to schooling, there remains dissatisfaction with the state of learning and the quality of education, or even one may argue, access to education. One of the main messages of The World Development Report 2018, by the World Bank, is that:

“***Schooling is not the same as learning and schooling without learning is not just a wasted opportunity, but a great injustice.***”

Education consists of formal systems through which people learn. One of these systems is school, which has been traditionally represented as the main place, space and time for education. However, learning also occurs through other systems, formally and informally, such as television, radio, the internet,

social media, religious institutions, political mikes and banners, libraries, museums, parks, etc.

“***However, an access to schooling does not automatically equate to an access to all the other systems of learning.***”

Again, students being physically present in schools does not necessarily mean that they are learning or achieving the competencies that have been set out by the national curriculum.

It is important that our conceptualization of education does not only include schooling, but also includes all the other possible ways through which people learn as well. The EFA National Review 2015, submitted to UNESCO, by the Ministry of Primary and Mass Education has reported that there are students, who end up having high grades in the national standardized tests, but who haven't necessarily achieved even basic competencies in language and mathematics.

This problem compounds itself in the state of tertiary graduates, who face increasing unemployment and widening a gap in marketable skills, even after graduation. This trend is alarming because it signals that a large number of Bangladeshi students, who have high grades and certificates lack quality learning experiences. This phenomena prevents Bangladeshi students from being both locally and globally competitive. One of the causes responsible for this trend, based on the findings of the EFA National Review 2015, is that students undergo a pedagogy of rote memorization, which help them perform well in exams, but is not sufficient in gaining the skills and competencies required by the curriculum.

While all types of jobs are important for a society to function, it is important from the perspective of human rights that people have choice in learning what they want to learn and doing what they want to do. As the world proceeds into the future with the rapid rate of technological disruptions, such as artificial intelligence, the internet of things (IOT), automation and the like, a pedagogy of rote memorization will not be sufficient for students. Moreover, teachers need to be adaptive to the skills that are required to remain competitive globally. Otherwise, the rate of unemployment will continue to increase and the opportunities that people have to work where they aspire to work will decrease.

It is essential that we have skilled labor who are able to effectively tackle the local and global challenges of tomorrow. It is possible that our people can collectively work towards the Bangladeshi future that we imagine. However, we need the appropriate knowledge, skills and mindsets to make this happen.

Access to Information (a2i) program of the Prime Minister's Office, which aims at ensuring easy, affordable, and reliable access to quality public services for all citizens of Bangladesh, has prioritized education as one of its priority areas of work analyzing the mentioned issues. In most of the consultations, seminars and conference that a2i has organized or attended for educational development, three recommendations kept coming up:

- 1. change the content of what is being taught,**
- 2. the process of teaching-learning and**
- 3. the assessment of learning.**

While it is true that at the heart of education lies the teaching-learning process and the relationship between the teacher and student, a2i realized that basing all efforts on just three recommendations will not be sufficient. There is much more that needs to be done in order to work towards a preferred future of education in Bangladesh.

Nevertheless, what is indeed the preferred future of education in Bangladesh? What else do we need to do in order to achieve that future, in addition to changing the educational content, assessment and teacher training?

A range of stakeholders from the public and private sector that are part of the Bangladesh education ecosystem were invited by a2i and Teach for Bangladesh to explore methods that involve transformative futures thinking. This was done in order to generate ideas and strategies that would enable these stakeholders realize the roles that they and others can play to work towards a preferred future of education in Bangladesh in 2041. Since this engagement, a2i has also been conducting research into the futures of various aspects of education. This publication aims to:



Sketch the preferred futures of the various components of the education ecosystem for Bangladesh.



Backcast the journey from the preferred futures of education in Bangladesh to the present.

We hope this publication is useful to you in your work.

4 QUALITY EDUCATION



METHODOLOGY

The methodologies chosen in this report are largely adapted from the field of Future Studies- the study of postulating possible, probable and preferable futures and the worldviews and myths that underlie them. Futures Studies intends to support individuals and organizations to better understand how change happens so that wiser and preferred futures can be created.

The idea behind transformative futures thinking is to regain agency over the future by collectively exploring alternative visions/pathways of the future. One of the tools that inspired the design of workshops was **Causal Layered Analysis (CLA)** (shown in the diagram on next page), developed by the futurist Sohail Inayatullah, which tell us that in order to implement policy/systemic changes effectively, one must also influence/change the worldview, belief or mindset and underlying myth, metaphor or narrative that result in the system.

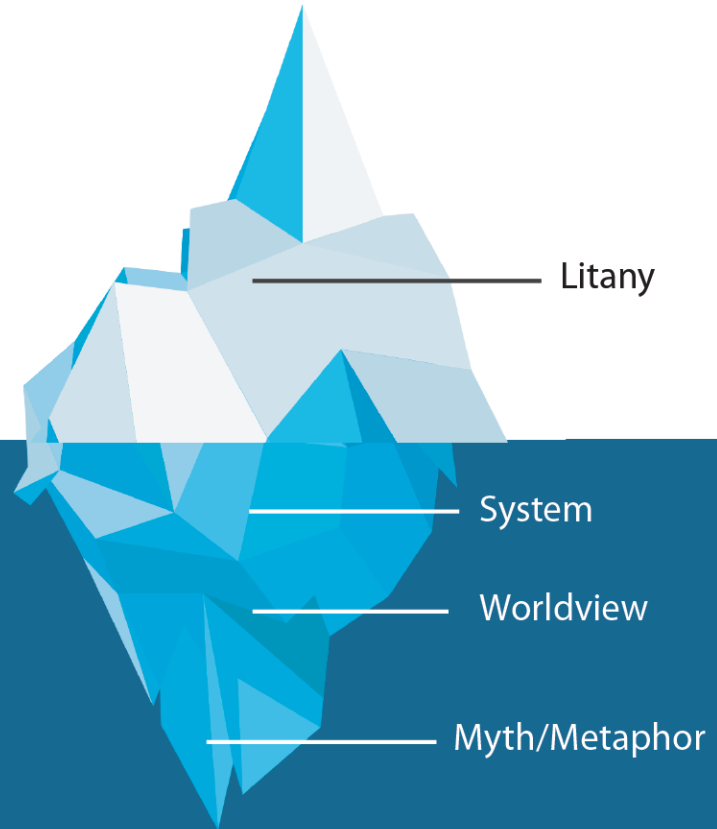




Photo: One of the interactive workshop sessions



In this final workshop, groups generated preferred futures in each individual topic and identified relevant slogans/myths that would shape their preferred futures. Then, they back-casted what needs to happen in particular years in order to reach their preferred futures.

Some potential projects were also ideated and discussed, as potential next steps after the workshop. We did an initial scanning as well to match organizations with relevant project interests. We have grouped the findings of this workshop into emerging themes, where the futures of themes complement each other. The limitation of this approach is that we did not include all the stakeholders in the consultation process.

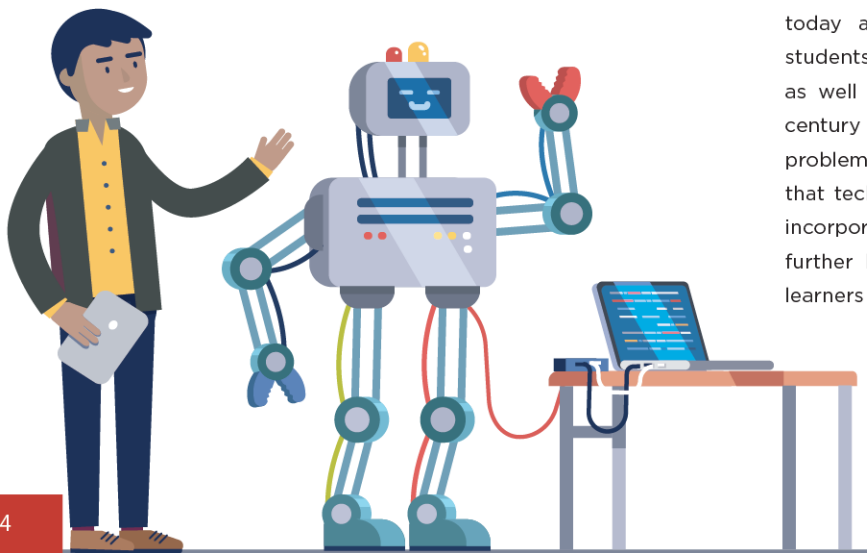
Ever since this workshop, a2i has continued to conduct research on the futures of various aspects of education and have consulted further stakeholders. The following pages represent what the participants have generated during the workshops, in addition to some research that has been conducted after the workshops.

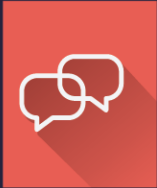
FINDINGS

BE A SOLUTION & learn 'how to learn'

The Future of Learners

Learners, or students are at the center of our educational efforts, but what do we want our students to be like in the year 2041? How ready are our students currently for the ever-changing world of today and tomorrow? The skills and knowledge students need to succeed in work, life and citizenship, as well as the support systems necessary for 21st century learning outcomes, are complex. Given the problems in the world are increasingly complex and that technologies are rapidly evolving, the a2i team incorporated the findings from the workshop, with further literature reviews, to suggest that in 2041, learners should have a 6CAP competency profile, where:





Learners are Communicators: Learners can communicate clearly to articulate their thoughts and ideas effectively using oral, written and nonverbal communication skills in a variety of forms and contexts. They will be able to utilize multiple media and technologies, and know how to judge their effectiveness a priori as well as assess their impact.



Learners are Collaborative: Learners will have the ability to work effectively and respectfully with diverse teams, making necessary compromises to accomplish a common goal & value the individual contributions made by each team member.



Learners are Critical thinkers and problem solvers: Learners will use various types of reasoning (inductive, deductive, etc.) as appropriate to the situation. They will be able to analyze how parts of a whole interact with each other to produce overall outcomes in complex systems and evaluate evidence, arguments, claims and beliefs, identify and ask significant questions that clarify various points of view and lead to better solutions.



Learners are Creative and Innovative: Students will create new and worthwhile ideas through brainstorming. Elaborate, refine, analyze and evaluate their own ideas in order to improve and maximize creative efforts. They will be able to work creatively with others to develop, implement and communicate new ideas effectively. They will also view failure as an opportunity to learn; understand that creativity and innovation is a long-term, cyclical process of small successes and frequent mistakes. They will be able to act on creative ideas to make a tangible and useful contribution to the field in which the innovation will occur.

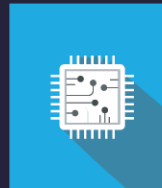
Learners are global, active Citizens: Learners will act as members of a global community, aware of the wider world & promote a sustainable way of life. Global citizens will participate in global conversation, learn through experiences and gain the ability to act on their empathy and knowledge. They will develop the mindset of integrating diversity, sustainability and human rights.



Learners are Changemakers: Learners will create positive change in a broader community and make a contribution in the real-world, not just in the classroom. Every change-maker needs to develop effective leadership, project management, organization. With the right mix of passion, knowledge and skills, they need to change their own corner of the world.



Learners are Adaptive: Learners will adapt to change, various roles, jobs responsibilities, schedules and context. They will deal positively with praise, setbacks and criticism. They will be able to understand, negotiate and balance diverse views and beliefs to reach workable solutions, particularly in multi-cultural environments.



Learners are Productive and proactive: Learners will have financial, economic, business and entrepreneurial literacy so that he/she can make appropriate personal economic choices, understand the role of the economy in society & use entrepreneurial skills to enhance workplace productivity and career options.



How do we actually work towards ensuring that students have a **6CAP** profile in 2041? The following pages will have various aspects of education that are mentioned in the following pages. Throughout the workshop, the futures of the following different aspects of education were developed:

Curriculum and Pedagogy

Educational Policy

Learning Environments

Educational Resources

Assessments

Teachers

Educational Governance, Community Participation & Partnerships

Research and Innovation

In each of these futures, we will highlight:

- **Characteristics of each aspect in the year 2041**
- **Back-casting from 2041 to 2019**
- **Expert's opinion**
- **Image of the particular characteristic in the year 2041**



PROBLEM-BASED and experiential

The Future of Curriculum and Pedagogy

*What should curriculum in Bangladesh be like in the year 2041?
What will students actually learn at the end of the day? What
experiences should students actually go through? What
pedagogies should be used to teach the curriculum of the future?*

“

Since there is no single set of abilities running throughout human nature, there is no single curriculum which all should undergo. Rather, the schools should teach everything that anyone is interested in learning.

- John Dewey, *Educationist*

“

The mediocre teacher tells. The good teacher explains. The superior teacher demonstrates. The great teacher inspires.

- William Arthur Ward

The group that was tasked with developing the future of curriculum in 2041 came up with following vision/slogan for the world and by implication, Bangladesh: **“এক পৃথিবী, এক প্রাণ, চাই আরও আনন্দ, আরও গান”** (One world, one heart, we want more fun and more song).

This vision highlights that education and society are inextricably linked and that a vision for education or curriculum is also inevitably a vision for society. Given the idea that education should be used to solve society's problems, essential curricular features suggested were:



6CAP: Curriculum should be based on the 6-CAP learner's profile, mentioned in the previous section.

Be a solution: Students will learn how to be the solution themselves through developing skills in critical thinking, creative thinking, problem solving, self-management, collaborative thinking and conscious leadership. This includes students going through the pedagogies of problem-based learning and experiential learning, not just rote memorization or listening to lectures.

Self-adaptation: Learning to adapt will require students to learn to learn as well. Pedagogies that enable such skills need to be developed and implemented in the classroom.



Personalization: Curriculum and pedagogies will be customized according to a student's personal learning style. Personalization will also ensure inclusive education by serving all children. It will also consider how multiple intelligences vary from student to student.





Lifelong: From birth to death, individuals will have access to quality environments and resources for learning. Pedagogies will differ at various stages of an individual's life and at different mediums of education.

Sustainability: To promote sustainable development, collective welfare and global wellbeing, and promote culture of peace and diversity.

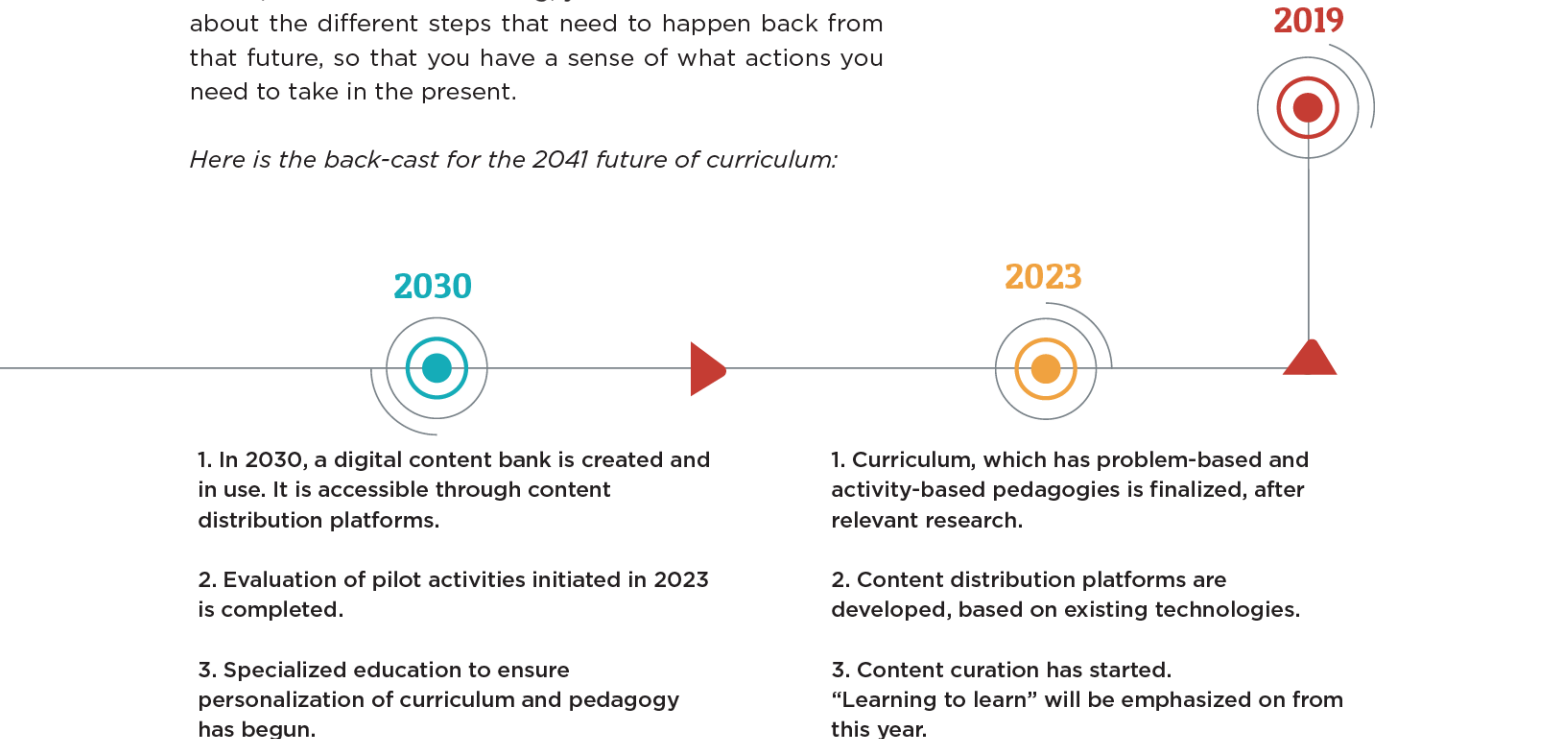
Recognition of Outside Learning (ROL): Curriculum will consider learning wherever it happens and accordingly, pedagogies need to be developed, where learning occurs outside the classroom. Assessments need to be developed, which can recognize learning outside the classroom.

Inspiration: Curriculum, its relevant pedagogies and other aspects will be designed to inspire students, such as embodied in the vision of wanting more fun and song. This in turn, will also inspire teachers and other relevant stakeholders. Inspiration, could be potentially measured through GNI (Gross National Inspiration)



The remaining dimensions of education have been based on these six essential curricular features. Now, how do we actually work towards a future like this? The following are the results of a backcasting exercise, which is different from forecasting. Forecasting is more about predicting the future, whereas in backcasting, you fix the future and think about the different steps that need to happen back from that future, so that you have a sense of what actions you need to take in the present.

Here is the back-cast for the 2041 future of curriculum:



Based on these findings and upon further literature review, the a2i team also suggested that the future on instruction in 2041 should be based on:



ACTIVE LEARNING

Teachers engage learners in inquiry-based and 3 dimensional (practices, core ideas, crosscutting) learning that promote questioning, inquiry, experiment, problem-solving, knowledge sharing, and knowledge creation skills.



TECHNOLOGICAL INTERVENTIONS

Technology facilitates teaching-learning processes but does not replace face to-face interactions.



INVOLVING COMMUNITY & INDUSTRY

Instructions involve the communities in the learning process so that parents along with their children own the education system. Also, the goal of instructions and assessments meet industries' needs to create a productive group of learners.



AUTONOMY

Learners will be instructed in a way that empowers them to become self-directed and lifelong learners



VALUES

Instructions preserve national and inter-national values, which are necessary for a learner to become a global citizen.

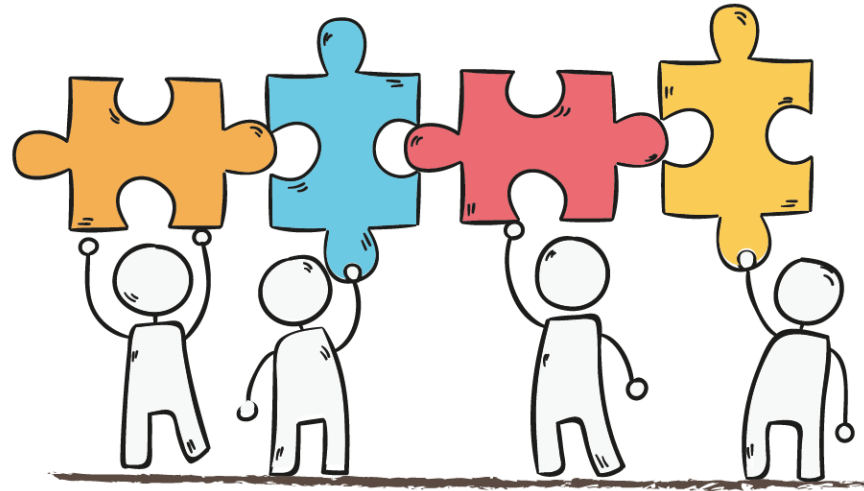


The one who adapts his policy to the times prospers, and likewise that the one whose policy clashes with the demands of the times does not.
- Niccolo Machiavelli

What will education policy look like in the year 2041? Who will implement the policy? Will the policy be suggestive or obligatory to follow? Will the policy influence only the ministries of education? Will it inform other ministries or government bodies as well? The following are characteristics of policy, which will provide guidance to education in 2041:

COMPREHENSIVE & practitioner driven

The Future of Policy



Policy will be **comprehensive** in nature. In the context of education, it should be noted that the future of education will not be achieved just through changes in education policy, but through policy reform across relevant ministries. Thus, policy formation must take a comprehensive approach.

Policy will be **practitioner-driven** since teachers, students and policymakers will research collaboratively to inform student-centred policies.

Policy will reflect **Implementation strategies** for the various aspects of education, such curriculum, environment, assessment, etc. These policies will be formed also to mitigate risks that may arise during implementation.



Policy will be **adaptive** and informed, based on real-time data tracking mechanisms, action research and futures research.

Policy-makers will undergo continuous **professional development.**

The following is the back-cast for the future of policy in 2041

1. All educators will receive training on how to plan for multiple career pathways.

2030



2. In order to ensure quality curricular content, content in the national curriculum will be also be reviewed by non-government specialist consultants, not just government officials.

1. The teacher's recruitment policy is changed.

2. Student voices are presented in policy discussions.

3. Policy is adapted to have an inclusive and contextualized curriculum.

4. Policies are context-driven.

5. Legal frameworks and provisions are in place for policies to undergo public scrutiny before they are passed.

2023



6. Policy ensures that there is continuous professional development for educational administrators and educators to implement appropriate curriculum and formative assessments.

7. Data related to education is also collected through research facilities for policy-making on educational infrastructure and other dimensions of education.

8. Risk mitigation strategies are developed and are included in policy in order to adapt to disruptions in education.

2019



1. There is increased collaborative dialogue and inclusion of marginalized communities in policy discussions.

2. Quality education frameworks are developed.

3. Specialized cluster research are conducted to inform various policy issues.

4. Risk identification and mapping of the education sector begins.

NATURE inclusive

The Future of Environments

In the year 2041, what sort of environments or spaces will students learn in? What other spaces for learning will exist besides classrooms and schools? Will learning happen outside classrooms as well? How nature-friendly or sustainable will learning environments be?

“

The best way to predict the future is to design it.

-Buckminster Fuller

“

Make it new - look at your space with 21st century eyes: Does it work for what we know about learning today, or just for what we knew about learning in the past?

- The Third Teacher, OWP/P Architects, VS Furniture, and Bruce Mau Design.

The Bangla slogan to describe learning environments in 2041 is প্রকৃতির সাথে- জলে, শহরে ও পাহাড়ে (Along with nature - in the water, the city and the mountains). Based on a nature-centered philosophy, in 2041, learning spaces will have the following characteristics:

Learning spaces will be open, which means that they will not just be constricted by walls.



Learning spaces will be healthy and nature-centric, which means that they will be sustainably created and may exist either within natural spaces or will be created without destroying natural spaces. Loving, nurturing and protecting nature in this process will be a source of learning, happiness and satisfaction.





Learning spaces will be inclusive and accessible by different types of learners.



Learning spaces will be aligned to the needs of national curriculum and assessments. For example, the learning spaces will encourage problem solving and project-based learning and will allow the teachers to act as facilitators.



Learning spaces will promote playful and joyful learning activities.



Augmented technologies could be used to complement the learning environment, allowing the learner to have access to more information and pedagogies.

Here is the back-cast for the future of learning spaces in 2041:

Back-casting

2030

Nature-centric and inclusive learning spaces will be created and used.

2023

1. The commission will use artificial intelligence to map all natural resources and suitable physical environments, where nature-centric and inclusive learning spaces can be built.

2. Data collected will also be used to inform policy on inclusive, learning spaces.

2019

A commission will be created to establish information systems on the environment. Systems will be created to collect data on the effectiveness of existing or new inclusive, learning spaces.

GAMIFIED

and technology driven The Future of Resources



“We shape our tools and
thereafter our tools shape
us.”

- Jim Dator.



“The immediate future is going to
be tragic for all of us, unless we
find a way of making the vast
educational resources of this
country serve the true purpose of
education, truth and justice”

- Anne Sullivan Macy

What resources will be used to design, implement and assess teaching and learning in the year 2041? How will these resources help students, teachers and policymakers? Will the choice of resources influence the choice of learning environments or vice versa?





Characteristics of educational resources to be used in 2041 are:

1. Educational resources will employ gamification and other required pedagogical techniques for learning.
2. Content delivery, as well as assessments, will be implemented through technologies, such as the internet, IOT, artificial intelligence, virtual reality, augmented reality, etc. Capacities will be developed so that both students and teachers can use these technologies.
3. These technologies can provide online and offline courses, which are both teacher-centric for teachers to be trained effectively and learner-centric, for students, to learn effectively. These technologies in online and offline learning will also reduce the dependence on textbooks for learning as well.
4. Educational resources are sustainable.
5. Technologies used to track-real time data will provide personalized feedback to students and teachers and provide relevant information to policy-makers.
Educational resources will be accessible and inclusive.

Back-casting



2030

- a. Access for students and teachers to use resources such as internet of things, artificial intelligence, virtual reality and augmented reality begins.
- b. These technologies will also enable personalized feedback.



2023

All students have access to the internet personally, which allows them to have access to a personalized curriculum.



2019

All students have access to the internet either directly or in a shared space.

REAL TIME

and ROL based

The Future of Assessments

*How do we know what students will learn in the year 2041?
How will we assess what students will be learning? What will
be the purpose for assessments?*

The group that generated ideas about assessments also came up with the following slogans in Bangla, which highlight what their ideas were based on:

“জানার জন্য শিক্ষা, জীবনের জন্য শিক্ষা, দিন শেষে মানুষ খুঁজি”- Education for learning, education for life, looking for humanity at the end of the day).

As assessments can be used to understand the needs of students, it is hoped by the participants that assessments are used for learning and that learning is used to shape competitive, global citizens. Assessments that students will go through in Bangladesh in the year 2041 will have the following characteristics:

”

**Measure what you value instead
of valuing only what you can
measure.”**

- Andy Hargreaves

”

**“Sometimes, the most brilliant and
intelligent minds do not shine in
standardized tests because they do
not have standardized minds.”**

- Diane Ravitch



Assessments will be in real-time and round-the-year, as opposed to summative assessments. Real-time assessments mean that data on student learning can be captured any time, instead of waiting for a particular time to capture that data, since students' learning is a continuous process. Such real-time systems will create large amounts of data on student performance, which could be used to inform policymakers through big data analysis.



Assessments will be formative, which means that assessments will be continuous while students are taught. Instead of assessing student performance at a certain time of the year (summative assessment), "assessment for learning" or "assessment as learning" will be emphasized. This means that assessments will be conducted so that students can learn through being assessed - the assessment itself becomes a learning tool.



Assessments will not be based on just pencil and paper, but will also be employed by technologies such as, artificial intelligence and IOT.



Assessments will be performance-based, i.e. assessing students' ability to apply the skills and knowledge that they learn in varying contexts.



Assessments will be ROL-based. This means that learning that happens outside of the classroom or educational institution will also be recognized and assessed.



Assessments will be personalized and customized according to the learning styles and multiple intelligence profiles of learners. Feedback from these assessments can also be personalized as well.



Assessments will be conducted by not only school authorities, but also self and peers.



Teachers will use assessment data to modify their lessons.



Data from assessments will be used to identify the needs of learners. Accordingly, assessments will be adapted to suit the needs of learners, as well as the need to understand learners.



Parents will be aware of the nature of assessments and will directly take part in the teaching-learning process.

Here is the back-cast for the future of assessments in 2041:

Back-casting

2019

An assessment committee is formed, who draft and propose a performance-based assessment policy, based on their learning about performance-based assessments.

Inclusive assessments are also developed to demonstrate how performance based assessments can be conducted for multiple learners.

2030

Prototype assessment tools and strategies are piloted and impact studies of these pilot projects will be conducted.

2023

Needs assessments and situation analyses are conducted using surveys and desk studies.

Performance-based assessment prototypes, individual assessment frameworks and round-the-year self assessment mechanisms are drafted and an initial group of teachers are trained to try out the assessments. The assessments are tried out and finalized based on feedback.

A national assessment center is established to design strategies and conduct activities regarding assessments.

Based on the detailed findings and upon further literature review, the a2i team suggests, assessments to be:

1. Dynamic, continuous, and learning-embedded in nature, where technology facilitates the assessment system.
2. Continuously assess the exact real-world-skills that we intend the students to acquire in 2041, instead of just assessing CGPA through one-time assessments.
Measure 6CAP
3. Justify learning goals and are aligned with instructions
4. Are Contextualized and personalized.
5. Are Diagnostic, prescriptive, instructive, and capable of documenting.
6. Provide meaning information to make policy decisions
7. Incorporate both formative and summative assessments.
8. Develop learners' autonomy through peer and self-assessments.



CO-LEARNER, CO-RESEARCHER

and CO-CONSTRUCTOR

The Future of Teachers

The future of education cannot be addressed without addressing the future of teachers - what roles should the teachers of Bangladesh play in 2041 and what pedagogies should they employ in the classrooms? Based on the workshop, the following are the characteristics that teachers should have in 2041:

Teachers will be facilitators of learning, not users of information. This implies a shift in pedagogy, where teachers are not only lecturing and employing rote memorization, but also using pedagogies that are more experiential and thus, facilitate learning.

Teachers will be reflective co-learners, which means that as students continue to learn, teachers will also learn.

Teachers will learn not only from the training they receive, but also through their teaching. There is a saying that goes, "When one teaches, at least two learn." By being learners themselves, teachers model the learning process to students.

Teachers will be co-action researchers along with other educational researchers, where action research will be considered a part of the job description of teachers. By being action researchers, teachers will be active learners as well.



- Teachers will be co-constructors of curriculum and policy along with other policymakers.
- Teacher will be trained based on their roles in implementing a personalized curriculum, using appropriate assessments, technologies and learning spaces.
- Teacher recruitment process will be **more rigorous** with a new, competitive pay structure
- **Multiple career progression** pathways will be open for teachers
- Teaching will be considered as a **dignified profession**.
- **Teacher-student ratios** will improve, due to an increased number of teachers.



2030

2023

2019

Back-casting

Certified and qualified teachers are recruited, where action research is a part of the teacher's job responsibility.

The number of teachers in the teacher workforce has increased and thus, teacher-student ratio has improved.

Teaching is considered as a well-paid profession.

Teachers will undergo a rigorous recruitment process.

Teachers will receive a high quality of pre-service education.

Teachers will receive continuous professional development and be mentored.

Teaching practices will be continuously assessed and monitored, so that teachers themselves can learn.

Teachers will receive a new pay structure.

Work on reforming teacher recruitment criteria begins.

Framework for uniform teacher training is developed.



Based on this workshop output and upon further literature review, a2i developed the following profile for teachers, where teachers should be:

Skilled and a strong advocate for skills:

Globally competent and have skills in critical thinking, problem solving, communication, flexibility and adaptability.

Focused less on testing and more on teaching skills that enable students to meet testing demands and beyond.

Understanding the importance of 21st century skills and how to best integrate them into daily instruction

Skilled in using new educational technologies for instruction

Lifelong learners:

*Well-equipped with subject and pedagogical knowledge, professional skills and supporting attitudes and values
Focused on understanding concepts than just knowing about them.*

Autonomous, where teachers are empowered to have flexible delivery of curriculum, assessments, lesson plans and flexible use of technologies and learning spaces.

Pedagogical experts:

Good assessors, who can impartially carry out formative assessments of students and develop good creative questions

- *Innovative and creative*
- *Creators of quality content for students*
- *Good performance actors*
- *Empathetic, cooperative and able to instruct clearly*
- *Managers of classrooms*
- *Information and technology literate*

Collaborators:

Able to exchange information and expertise among teachers and help weaker teachers to become more effective

Enabling other teachers and principals to connect their own learning communities

Supporting other teachers in their roles as facilitators of learning.

- **Investigators and researchers**
- **Having multiple career progression pathways and competitive pay structure**

COMMUNITIES AS CONTRIBUTORS

The Future of Governance and Partnerships

“

“When everybody contributes a change to what he or she notices, it is then we will change our world.”

- Sunday Adelaja, The Mountain of Ignorance

“

“I believe that those closest to the children should be making the decisions about how funds should be spent, what the curriculum should look like, and what's the best way to help our students.”

-David Ige, current Governor of Hawaii

How will decisions be made and who will make decisions regarding education in 2041? What will educational governance look like? What will partnerships look like? The Bangla slogan that the participants of the group discussing education governance came up with is:

“দশে মিলে করি কাজ”

(loosely translated as, we work together)”. Keeping that spirit of working together in mind, the future of educational governance in Bangladesh in 2041 is as follows:

Educational governance will consist of participation and voice, in terms of financing and management, from all related stakeholders. Related stakeholders include learners, educators, community, public and private partners. Community members will be active contributors in curriculum and policy discussions.

All educational institutions will be public, but will be governed locally. There will be no need for NGOs or private schools.

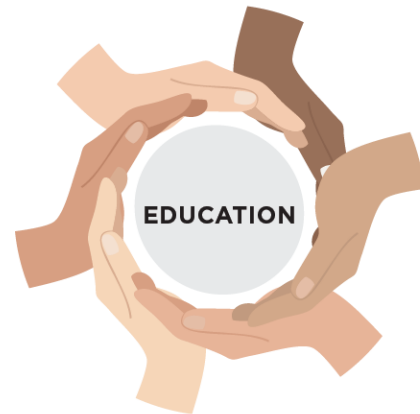
Educational governance will be decentralized with local authorities being more empowered and accountable.

All educators have career pathways to positions of educational governance within the Ministries of Education or institutions within the Ministry of Education, for example, Directorate of Primary Education, Directorate of Secondary Education, etc.

Government moves from being just a funder to also being an enabler to how these funds are utilized by providing regulation and enabling funding mechanisms for practitioners and learners.

Public-private partnerships and networks will be established to continuously review curriculum and assessments.

An electronic education network is established among government, teachers and students.



The following is the back-cast for the future of educational governance:

2030: All educational institutions are state-owned and NGO/private schools are abolished. Local authorities are empowered to be in charge of the school management.



2023: At least one decentralized school region is piloted and tested, where that school region has more decision-making power with regards to allocation of resources, decisions on pedagogy, assessments and teacher recruitment, etc. Further technologies, such as real-time data management systems, are also integrated in educational management.



2019: School-based leadership development training for head teachers and other relevant administrators are conducted for better administration and to build partnerships with the community. Community stakeholders are also involved in budgetary decisions, teacher recruitment and the like. For example, both teachers and educational administrators can give presentations on contemporary educational issues in front of community members and students as part of the recruitment process.



FROM LEARNING CLUBS

to Research Facilities

The Future of Educational Research and Innovation

What research and innovation systems need to be established to realize the various futures of education for the year 2041? The characteristics of the future of education research and innovation in 2041 are as follows:

Research facilities are established to continuously probe future necessities in order to make systems adaptable and innovative and to continuously re-imagine the future.

Learning models will continue to be incubated and researched on to continuously improve learning environments.

Alternative learning hubs to develop skills in storytelling, sports, arts, design, theater, film-making, music, outdoor activities, hardware are established and

used within or outside schools.

These hubs will also be research wings to develop education, where students, teachers and professional researchers together contribute to research.

Government integrates public and private innovations in education.

The following is the back-cast for educational research and innovation in 2041:

““

“Research is to see what everybody else has seen, and to think what nobody else has thought.”

- Albert Szent-Gyorgyi

““

“I believe in innovation and that the way you get innovation is you fund research and you learn the basic facts.”

- Bill Gates

2030

2023

2019

Back-casting

Learning clubs or facilities will evolve to become diverse, personalized research wings in each school or community.

These facilities will create a data network that provides individualized, personalized feedback to students and teachers.

All students will have access to diverse learning clubs or facilities. Research facilities contribute to policy-making to various dimensions of education

Establishment of facilities for supplemental/alternative learning topics such as storytelling, sports, arts, design, theater, filmmaking, outdoor activities, hardware, literacy, technology, etc, is initiated.

Research facility or unit to predict futures necessities and adaptation strategies is established.

Specialized research cluster is initiated to inform various policy issues.

Nurturing innovation in thought across various dimensions is initiated and encouraged.



NEXT STEPS

The back-casting steps give us a broad understanding of the various initiatives that need to be launched within the next year. Based on the futures produced in the workshop and the corresponding back-casts, a2i has proposed a range of projects in order to commence work towards the preferred future of education in 2041. These projects are as follows:

1.

Pilot content on “learning to learn”, which is personalized and based on multiple intelligences. (Inclusive and need based, based on learner’s type)

2.

Pilot performance-based assessments, which assesses student’s ability to apply the knowledge and skills they have gained. Assessments for the the 4Cs - creativity, critical thinking, collaboration and communication will also be piloted, where students will be assessed on whether they can apply the 4Cs in real-life situations. Assessments will also recognize outside learning.

3.

Conduct action research on roles of teachers in mitigating students’ learning problems and son,, where teachers will be facilitators, co-learners, co-researchers and co-constructors of curriculum and policy.



4.

Develop guidelines for ROL & decentralize policy dialogue

5.

Develop governance that will address learning content delivery, performance-based assessment, teacher roles, etc.

6.

Develop infrastructure for content delivery, assessment, extra-curricular activities, etc

Various stakeholders will be contacted to identify who has interest in either working, collaborating or supporting the projects. In addition to these projects, one must consider the CLA described in the background section of this report. In order to ensure that policies are changed and implemented, corresponding worldviews/discourse and myths/metaphors are needed to be shifted. Accordingly, in order to change mindsets or worldviews, partners, such as researchers, intellectuals or think-tanks are encouraged to research and publish articles in journals, books, newspapers, magazines

or other media platforms. These issues would have to be presented in a range of conference and seminars - the idea is to encourage alternative philosophies or languages that would be necessary for stakeholders to adopt. If stakeholders start thinking in the new language, it is assumed that the worldview has shifted.

For the new discourse or language to develop, stories that we want to tell about the preferred future have to be identified or created, based on the preferred myths or metaphors. These stories have to be presented through multiple media, such as infographics, videos, short films, comics, art, photographs, plays, sculptures, video games, memes, etc. Storytellers and companies within these various storytelling media are encouraged to come forth and share stories that encourage the preferred future on their corresponding platforms.

CONCLUSION

Feel free to reach us at education@a2i.gov.bd if you would like to:

- i. Provide feedback on the futures themselves, the steps towards those futures or propose initiatives
- ii. Participate or support any of the projects that have been mentioned
- iii. Conduct futures exercises or apply futures thinking methodologies regarding your own project related to education or on your own organization
- iv. Contribute to the discourse that would help encourage a preferred future of education or tell stories around the future of education.

Finally, as we continue our work on shaping the preferred futures of education in Bangladesh in the year 2041, this report ends with two provocative statements, especially if you have found some of the ideas presented in the document far-fetched and seemingly impossible.

The first quote is “Only those who see the invisible can do the impossible”, a quote attributed to Bernard Lown, developer of the modern defibrillator and one of the pioneers. The final quote by one of the pioneers of futures studies, Jim Dator is, “Any useful idea about the future should appear to be ridiculous.”

It is hoped that the information elucidated above give the reader a glimpse into the futures of education in Bangladesh in the year 2041 and potential steps about how we can work towards these futures. Some initial projects have been proposed, however, we would like to receive as much feedback as possible.



সারসংক্ষেপ

বাংলাদেশের মানুষের জন্য সহজ, সাশ্রয়ী এবং মানসম্পন্ন জনসেবা নিশ্চিত করার লক্ষ্যে এক দশকেরও বেশি সময় ধরে এটুআই প্রোগ্রাম কাজ করে যাচ্ছে। উন্নয়নের অন্যান্য অনেক ক্ষেত্রের সাথে সাথে শিক্ষাকে অগ্রাধিকার দিয়ে বাংলাদেশের শিক্ষা ব্যবস্থার উন্নয়নে এটুআই ইতোমধ্যে নানাবিধ উদ্ভাবন নিয়ে এসেছে।

এরই ধারাবাহিকতায়, চতুর্থ শিল্প বিপ্লব মোকাবিলায় বাংলাদেশের শিক্ষাব্যবস্থায় কি কি পরিবর্তন করা প্রয়োজন এবং বাংলাদেশের ভবিষ্যত শিক্ষার রূপরেখা প্রণয়নে কি কি করণীয়- এই প্রশ্নের উত্তর খুঁজে বের করতে এটুআই বিভিন্ন সময়ে বিভিন্ন উদ্যোগ গ্রহণ করেছে। সরকারি এবং বেসরকারি খাত থেকে বিভিন্ন অংশীজনের অংশগ্রহণে কতগুলো ধারাবাহিক কর্মশালার মধ্য দিয়ে একজন ভবিষ্যত বিশেষজ্ঞের সঞ্চালনায় বাংলাদেশের শিক্ষার নানাবিধ কাল্পনিক ভবিষ্যত নিয়ে আলোচনা করা হয়।

উন্নত বিশ্বের সাথে তাল মিলিয়ে চলার জন্য বাংলাদেশের নাগরিকদের জন্য যে শিক্ষাব্যবস্থার আয়োজন করা প্রয়োজন এবং তার বাস্তবায়নে আমাদের যা যা করণীয় তা এই কর্মশালাগুলোর মধ্য দিয়ে একটি রূপ পেয়েছে। এই প্রকাশনাটিতে বাংলাদেশের ভবিষ্যৎ শিক্ষাব্যবস্থার ইকোসিস্টেমের বিভিন্ন উপাদানের কাল্পনিক রূপায়ন করা হয়েছে, এবং সেই ভবিষ্যৎ অর্জনের জন্য বর্তমান থেকে কোন কোন কাজ কীভাবে করতে হবে তার একটি কৌশলগত পরিকল্পনা বর্ণনা করা হয়েছে।



মূলত এই কর্মশালাটি 'ফিউচার স্টাডিজ' পদ্ধতির আদলে পরিচালনা করা হয়েছে। কর্মশালায় বিভিন্ন প্রতিষ্ঠান হতে আগত অংশীজনের আলাপচারিতার মধ্য দিয়ে এবং সংশ্লিষ্ট আরও কিছু সাহিত্য পর্যালোচনা করার পর এটুআই টিম ২০৪১ সালের মধ্যে বাংলাদেশের শিক্ষার্থীদের জন্য কিছু প্রত্যাশিত ৮টি যোগ্যতা-দক্ষতার তালিকা প্রস্তুত করেছে, যেটা **6CAP** সংকেত দিয়ে প্রকাশ করা হয়েছে।

আগামীতে বাংলাদেশের শিশুরা হবে ব্যক্তিগত, পারিবারিক, সামাজিক এবং জাতীয় ও আন্তর্জাতিক জীবনে যেকোন সমস্যা সমাধানে পারদর্শী। শিক্ষার্থীদের জন্য প্রত্যাশিত দক্ষতাগুলো হল- যোগাযোগে দক্ষ (**Communicative**), পারস্পরিক সহযোগিতামূলক (**Collaborative**) সুস্বচ্ছিত্তন ক্ষম এবং সমস্যা সমাধানে দক্ষ (**Critical Thinker and Problem Solver**), সৃজনশীল (**Creative and Innovative**), বিশ্ব নাগরিক (**Citizenship**), চেঞ্জমেকার (**Changemaker**), অভিযোজনক্ষম (**Adaptive**) এবং উৎপাদনক্ষম (**Productive**)।

শিক্ষার্থীদের এইসকল দক্ষতা অর্জনে সহযোগিতা করার জন্য যে পরিবেশ তৈরি করা প্রয়োজন তার জন্য শিক্ষাব্যবস্থার ইকোসিস্টেম এর অন্যান্য উপাদানগুলোও বিচার-বিশ্লেষণ করা হয়। ফলশ্রুতিতে এই প্রতিবেদনে শিক্ষানীতি, পাঠ্যক্রম, পাঠ্যপুস্তক, শিক্ষার পরিবেশ, মূল্যায়ন পদ্ধতি, শিক্ষক, শিক্ষা প্রশাসন, সমাজের অংশীদারিত্ব, গবেষণা এবং উদ্ভাবন সম্পর্কে আলোচনা করা হয়েছে।

পরবর্তী পদক্ষেপ হিসাবে, এটুআই কতগুলো কার্যক্রম প্রস্তাব করেছে যা ভবিষ্যৎ শিক্ষা বাস্তবায়নে সহায়ক হবে। এই কার্যক্রমসমূহ বাস্তবায়নের জন্য বিভিন্ন অংশীজনের ভূমিকার উপর গুরুত্বারোপ করা হয়েছে। আমরা বিশ্বাস করি এই প্রতিবেদনটি বাংলাদেশের শিক্ষা ব্যবস্থার ভবিষ্যৎ নিয়ে আলোচনার জন্য চিন্তার খোরাক হিসাবে কাজ করবে। এ বিষয়ে যেকোন মতামত কিংবা পরামর্শ প্রদানের জন্য আপনাদেরকে স্বাগত জানাই।



GLOSSARY

The definitions in this glossary are based on Wikipedia definitions and have been vetted by the authors of this report.

Automation: Automation is the technology through which a process can be conducted without human intervention.

Back-casting: Backcasting is a planning method that starts with defining a preferred future and then works backwards to identify policies, programs or activities that will connect that specified future to the present. While forecasting involves predicting the future based on current trend analysis, backcasting discusses the future from the opposite direction - the desired future is fixed, so that present actions can be strategized. The fundamentals of the method were outlined by John B. Robinson from the University of Waterloo.

Causal Layered Analysis: Causal layered analysis (CLA) is a technique used in strategic planning and futures studies to more effectively shape the future. When it comes to analysis the causes of any particular phenomenon, the technique takes into account various layers of causes that result in the visible phenomena - systems, worldviews and myths or metaphors. The technique was pioneered by Sohail Inayatullah, a Pakistani-Australian futures studies researcher.

Experiential learning: Experiential learning emphasizes learners and the learning context for ensuring active learning. Learners learn by reflecting on their experiences throughout the learning process. Learners gain autonomy through hands-on activities in experiential learning process.

Gamification: Gamification is the application of game-design elements and game principles in non-game contexts. Gamification commonly employs game design elements to improve user engagement, organizational productivity, flow, learning, crowdsourcing, employee recruitment and evaluation, ease of use, usefulness of systems, physical exercise, traffic violations, voter apathy, and more.

Internet of Things: The Internet of Things (IoT) is the network of physical devices, vehicles, home appliances, and other items embedded with electronics, software, sensors, actuators, and connectivity which enables these things to connect and exchange data, creating opportunities for more direct integration of the physical world into computer-based systems, resulting in efficiency improvements, economic benefits, and reduced human exertions.

ROL: ROL stands for Recognition of Outside Learning. Traditionally, learning has been formally recognized as learning that occurs within the classroom. However, learning that students undergo outside the classroom is not usually formally recognized or tracked. The acronym ROL aims to advocate that learning outside the classroom should be recognized formally as well.



Glimpse of a2i Team With Participating Members of a Workshop



FUTURE EDUCATION



**Cabinet
Division**
Government of the People's
Republic of Bangladesh



**ICT
DIVISION**
FUTURE IS HERE



USAID
FROM THE AMERICAN PEOPLE



**UN
DP**
Empowered lives.
Resilient nations.

