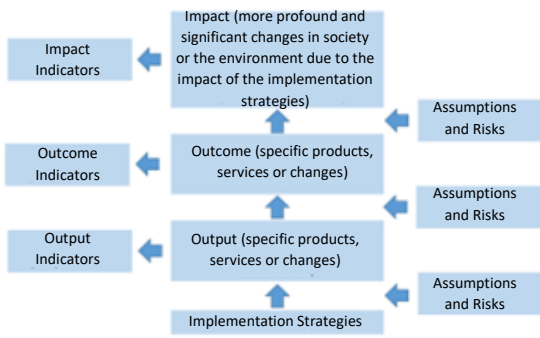# Theory of Change to Promote Inclusion in the Education System of the Republic of Kazakhstan

Based on the findings of the Formative evaluation of education with a focus on inclusion and the Evaluation using Big Data

Figure 1. Schematic depiction of a theory of change

The term *'theory of change'* describes how activities lead to a set of outcomes and outputs that contribute to achieving the final impact. It can be applied at different levels, such as activities, projects, programmes, policies, strategies, or organisations. A theory of change can be planned for an intervention or adapted in response to changes and decisions made by stakeholders. The term is commonly used to refer to any version of the process, including a chain of outcomes, which shows a series of blocks from inputs to outputs, outcomes, and impacts, or a logic model, which presents the same information as a matrix [1]

Rationale

The formative evaluation of education with a focus on inclusion and the evaluation using big data have identified key barriers to the development of inclusive and high-quality education in Kazakhstan, which include the following aspects:

- Kazakhstan has reached its limits in the development of inclusive education by 2021. Eleven percent of pre-schoolers with special educational needs attended special groups and 13 percent were in special kindergartens. The increase in schools providing an environment for inclusive education was accompanied by a focus on physical access, digitalization, and increasing teacher salaries. However, the formative evaluation has shown that additional investment in the physical infrastructure of schools is needed.
- The government programmes hardly mention the involvement of parents, community participation, and children in migration processes. Gender equality is barely represented in official programmes, with discussions about boys dominating online discussions.
- Government programmes pay little attention to gender equality in education, while girls are underrepresented in online discussions related to inclusive education.
- Negative discussions on social media reflect the lack of protection of the rights of children with disabilities in educational institutions, with a focus on cases of abuse and violence. The Government of Kazakhstan is taking steps to improve safety standards in pre-school education.
- Regional differences can be observed in the discussions on inclusive education, with a focus on large cities such as Astana and Almaty.

Proposed Theory of Change

Based on the results of the Formative Evaluation of Education with a focus on inclusion and the Evaluation using Big Data, a theory of change was developed with the support of UNICEF in partnership with the Ministry of Education of the Republic of Kazakhstan, which states the following:

If we 1) strengthen partnerships and multisectoral coordination; 2) universalise access and promote equity and continuation of the services for children at different ages; 3) broaden the means and scope of basic education to support children holistically, this will contribute to achieving Sustainable Development Goal 4 (SDG 4) in education. As a result, inclusive and equitable quality education will be ensured, and lifelong learning opportunities will be promoted for all.

This can be used to:

- *Improve inclusive education:* The application of the theory of change enables the development of strategies and interventions to improve inclusion in educational processes.
- *Optimise educational programmes:* Analysing big data and applying the theory of change help to identify effective teaching methods and make adjustments to improve the quality of education.
- *Adapt to change:* The theory of change can be used to develop flexible educational strategies that can be adapted to the changing requirements and needs of learners.
- *Ensure systemic management:* By applying the theory of change in the context of systemic management of education, the end goals can be achieved by optimizing the sequence of interventions and responding to the results of the evaluations.
- *Promote data in decision-making:* The use of big data within the theory of change helps to make more effective decisions based on evidence and data analysis.

A theory of change developed through the formative evaluation and the big data evaluation analysis can therefore be a tool for improving inclusion and optimising educational practice.

Other practical measures that contribute to the main outcomes of the theory of change are presented below:

Outcome 1. Strengthening partnerships and multisectoral coordination

Given the bottlenecks, enablers, and risks, strengthening partnerships and multisectoral coordination will require 1) the development of a mechanism for coordination/partnership/planning at the horizontal and vertical level; and 2) policy development in the direction of integration between services at the local level.

The action plan for the implementation of the recommendations of the independent formative evaluation of the Government Education Development Programmes with a focus on inclusion and the use of big data, conducted with the support of UNICEF, therefore proposes the following activities to achieve the above outcomes: 1) convene a working group, develop objectives and strategy, define roles and responsibilities, establish a coordination mechanism, strengthen staffing at the central level to manage the process, and build partnerships; 2) develop and implement an action plan for the transition from integration to a fully inclusive education system for children with special educational needs; 3) create a structure to coordinate integrated services for children at risk of exclusion; 4) develop individualised support plans, including educational, psychological, social and health support; 5) create a team of professionals and parents for the holistic development of children at risk; 6) develop a unified methodology for data collection in inclusive education through intersectoral work; 7) establish an integrated system of data collection in inclusive education; 8) establish intersectoral programmes to support vulnerable children (including children in migration processes and in contact with the law); 9) prepare governmental programme documents taking into account an interdepartmental and intersectoral approach; 10) develop recommendations for inclusion in the Roadmap to improve the provision of comprehensive assistance to children with disabilities in the Republic of Kazakhstan until 2026, and regional roadmaps. The implementation of these activities will contribute to the development of mechanisms for coordination/partnership/planning at the horizontal and vertical levels and policy development in the direction of integration between services at the local level, which will further strengthen partnerships and multisectoral coordination.

Outcome 2. Universalizing access and promoting equity and continuation of the services for children of different ages

Universalizing access and promoting equity and continuation of the services for children of different ages will require the implementation of the following objectives: 1) development of early identification and early intervention services; 2) development and planning the investments in the pedagogy, leadership, and school environment for learning, accessible for all children; 3) focus on early childhood development services in terms of pedagogy, capacity development, 21-century skills, and leadership.

The following activities are proposed to develop early detection and early intervention services: 1) analyse the understanding of the concept of "early intervention" and assess the potential and opportunities for its implementation in Kazakhstan to support programmes and initiatives in this area; 2) strengthen the application of the concept of early intervention through its integration into strategic documents of the Kazakh MoE and MoH; 3) create or improve an online platform for sharing best practises in early intervention; 4) improve home visiting programmes focusing on early childhood development monitoring, developmental care, parenting programmes and communication with parents; 5) improve qualifications of teachers in inclusive education; 6) create and apply mobile applications and online remote visits, especially in rural areas; 7) promote an integrated early identification and intervention service based at the National Research and Practice Centre for the Development of Special and Inclusive Education; 8) provide information to parents through 79 competence centres and advisory points.

For development and planning the investments in the pedagogy, leadership, and school environment for learning, accessible for all children, proposed activities include: 1) monitoring the connectivity of schools to the Internet; 2) conducting an audit of the availability and needs for assistive and adaptive technology/equipment in preschools, secondary schools and vocational training institutions using the example of the Accessible Kazakhstan Project https://doskaz.kz/; 3) assess needs in and train teachers and headmasters on inclusive education; 4) provide mentoring support for teachers and create an online

platform for sharing experiences; 5) assess and adjust salaries of teachers working with vulnerable children, taking into account the complexity of their work, introduce salary differentiation; 6) train executives on effective use of funds for inclusive education in the context of per capita financing, etc.

To improve early childhood development services in terms of pedagogy, capacity development, 21st century skills and leadership, proposed activities include: 1) provide up-to-date programme content for skills development in digital, innovation and aerospace; 2) implement training programmes for parents and educators to create a consistent approach to skills development in children and maintain the partnership between home and education institutions; 3) provide an inclusive environment in the delivery of skills development disciplines, taking into account the diverse talents and interests of children; 4) provide adaptive support equipment to organisations; 5) conduct regular self-assessment of educational institutions, assessment of outcomes and adaptation of educational strategies to children's needs and achievements; 6) develop cooperation with local businesses and organisations to provide children with the opportunity to participate in thematic workshops, internships, mentoring and activities aimed at expanding their knowledge and skills in various fields for further career orientation.

Carrying out the activities presented will help to achieve the following objectives: 1) development of early identification and early intervention services; 2) development and planning the investments in the pedagogy, leadership, and school environment for learning, accessible for all children; 3) focus on early childhood development services in terms of pedagogy, capacity development, and leadership. This in turn will lead to the outcome of universalizing access and promoting equity and continuation of the services for children at different ages.

Outcome 3. Broadening the means and scope of basic education to support children holistically

For broadening the means and scope of basic education to support children holistically the following tasks are required to be implemented: 1) empowering teachers to work flexibly and teaching them the principles of gender-responsive pedagogy; 2) ensuring a system for continuous professional development at all levels of education; 3) development of methodological materials accessible in different languages for children at a different age with different needs; 3) implementation of the integrated and multisectoral approach in evaluation and planning of the school programmes on the individual level.

For example, for empowering teachers to work flexibly and teaching the principles of gender responsive pedagogy, the following activities are proposed: 1) improve indicators in the National Education Database to collect gender-segregated data; 2) conduct awareness-raising campaigns on the importance of girls' education and overcoming obstacles in regions where early marriage is favoured; 3) examine the reasons for children not attending school; 4) improve qualifications of teachers related to gender responsive pedagogy; 5) study updated teaching materials with gender equality in mind; 6) improve qualifications of textbook authors with a gender perspective; 7) research gender challenges in education; 8) provide access to career guidance and career resources for both genders; 9) provide mentoring for female educators aspiring to leadership positions; 10) analyse barriers to women in leadership positions and develop measures to overcome them; 11) conduct awareness-raising campaigns to support women in leadership positions in education.

For the development of methodological materials accessible in different languages for children at a different age with different needs, the following activities are recommended: 1) conduct extensive analyses of the needs of children of different age groups, including special education and language needs; 2) establish a multilingual working group of education experts, linguists, inclusion educators and representatives of the parent community; 3) create tiered materials that are age-, developmentally and interest-appropriate; 4) test the materials based on children's diverse needs; 5) adapt materials based on test results and feedback from parents; 6) organise training for teachers on the effective use of teaching materials in an inclusive environment; 7) provide resources and recommendations for individualising learning according to each child's needs; 8) develop a digital platform for easy access to teaching materials

in different languages for children, parents and educators; 9) establish a system to monitor the effectiveness of the use of teaching materials.

For the implementation of the integrated and multisectoral approach in the evaluation and planning of the school programmes on the individual level, the following activities are recommended: 1) establish an inter-departmental working group to develop a coherent Action Plan for the creation of school programmes; 2) conduct consultations and dialogues with teachers, parents, education experts, and community representatives to define the objectives, outcomes, and indicators to be included in the Plan; 3) establish cooperation and coordination mechanisms between different sectors, including education, social, health and other sectors, to ensure coherence in the planning and implementation of inclusive education; 4) train educators to integrate soft skills development into individual programmes for learners with special educational needs; 5) develop and provide specific teaching materials and resources to support teachers in integrating soft skills development into individual programmes.

The examples presented show what the logic of achieving outcomes can look like within the framework of a theory of change. This approach provides a structured method for analysis, planning, and evaluation and helps to systematize the steps required to achieve specific goals. By taking context, resources, and stakeholders into account, the theory of change provides a framework for flexible and effective management of change processes in an educational environment. An important aspect is the continuous adaptation of strategies in response to feedback and changes in the external environment, which contributes to the sustainability and long-term success of educational initiatives.

Theory of Change (Formative Evaluation)

Major bottlenecks

Enabling environment:

- The concept on inclusive education is developed but is still in the beginning of implementation.
- Public attitudes are slowly changing, but still discrimination and stigma exist, especially in certain regions.
- Lack mechanism for coordination/ partnership in the education sector and at the multisectoral level.
- Centralized and no participatory mechanisms for planning, monitoring, and evaluating educational provision for children at risk of exclusion from quality and adapted education, due to family, social, economic, and/or individual conditions.
- Centralized per capita financing oriented to the children with SEN.

Demand:

- Many children with SEN at an early age do not have access to inclusive preschool education.
- School/ECEC infrastructure does not fully meet the existing needs.
- The scope of basic secondary education is oriented towards receiving knowledge rather than skills.
- Many families of children with SEN use private educational services while those services are not affordable for all.
- Systematic problems in early identification and early intervention and prevention.
- No transition to ensure continuation of the curriculum between early childhood, primary and secondary education.

Supply:

- The existing network of preschool education organizations does not respond to the needs of inclusive education.
- Work overload of PMPCs and lack of capacity for needs assessment of children with SEN.
- Teacher education programmes, both preservice and in service, do not fully address the provision of inclusive education in schools/preschool.
- The school environment for learning, material and technical base and digital infrastructure of educational organizations is not fully developed to meet the needs of all learners.

Quality:

- The individual programmes for students with SEN are oriented towards knowledge development rather than skills building.
- There are no tailor-made approaches for working with the other groups of vulnerable children at risk of exclusion, apart from children with SEN.
- Not enough materials and methodological materials in Kazakh language.
- Professionals and specialists are often inadequately trained.
- Strict methodological requirements for teachers on how to work with children with SEN.
- Low quality of screening, International Classification for Functioning (ICF) is not implemented.
- There are regional differences in quality of working with children with SEN.

2021

Assumptions: Capacity development of teachers and flexibility of their work will ensure implementation of the individual approach
If early intervention and identification is developed, support for the children will start earlier and they will more easily be included in educational activities and there will be a bigger return of investment.
An integrated effort of work between the three systems would ensure inclusion of all groups of children.

ENABLING ENVIRONMENT

SUPPLY

QUALITY

Risks: Rushing into preparation of teachers could make it difficult to know what the next steps are to follow.
Too much focus on early intervention, instead of the other system components (like secondary and vocational education).
Per capita financing could lead to an increase in the number of children studying in "special classes".

Outputs	Outcomes

2030

Development of mechanism for coordination/ partnership/planning at the horizontal and vertical level

Policy development in the direction of integration between services at the local level

Strengthening partnerships and multisectoral coordination

Development of early identification and early intervention services

Development and planning the investments in the pedagogy, leadership, and school environment for learning, accessible for all children

Focus on ECD services in terms of pedagogy, capacity development and leadership

Universalizing access and promoting equity and continuation of the services for children at different ages

Empowering teachers to work flexibly and teaching the principles of gender responsive pedagogy

Ensuring a system for continuous professional development at all levels of education

Development of methodological materials accessible in different languages for children at a different age with different needs

Implementation of integrated and multisectoral approach in assessment and planning of the school programmes on the individual level

Broadening the means and scope of basic education to support children holistically

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all (SDG 4)