

Approved by the Board of Trustees  
Nazarbayev Intellectual Schools AEO  
14 December 2015, Protocol 62

**NAZARBAYEV INTELLECTUAL SCHOOLS  
AUTONOMOUS EDUCATIONAL ORGANISATION  
RESEARCH DEVELOPMENT FRAMEWORK**

**ASTANA 2015**

## **1 BRIEF OVERVIEW**

The present Research Development Framework (hereafter the 'Framework') proposes an approach to the fulfilment of the commitment in the Nazarbayev Intellectual Schools AEO 2020 Development Strategy (hereafter 'the 2020 Strategy') to informing Nazarbayev Intellectual Schools AEO (hereafter 'NIS AEO') innovations and decisions by the best available research evidence and fulfilling its obligation to monitor and evaluate its ongoing programmes of reform.

The present Framework defines the aims and objectives, principles, foci, stages, mechanisms, expected outcomes and indicators of NIS AEO research work.

It thereby regulates all interaction between those involved in the research process.

1	BRIEF OVERVIEW .....	2
2	INTRODUCTION .....	4
2.1	International Developments in the Field of Educational Research .....	4
2.2	National Developments in the Field of Educational Research.....	5
2.3	Review of the Current Situation at Nazarbayev Intellectual Schools .....	5
2.4	Legal Documents.....	6
3	AIMS AND OBJECTIVES.....	6
3.1	Strategic Aim of the Research Development Framework.....	6
3.2	Objectives of the Research Development Framework .....	6
4	PRINCIPLES FOR CONDUCTING RESEARCH .....	6
5	RESEARCH ACTIVITIES AND RESEARCH PLANNING .....	7
5.1	Research Activities .....	7
5.2	Research Areas .....	8
5.3	Research Planning .....	9
6	PRINCIPAL MECHANISMS FOR IMPLEMENTING THE FRAMEWORK.....	9
6.1	Capacity Building.....	9
6.2	Developing Cooperation between Central Management, Centres and Schools.....	10
6.3	Developing Cooperation between NIS and Research Organisations .....	10
6.4	Development of the Statistical Database.....	10
6.5	Communication .....	10
7	RESEARCH GOVERNANCE .....	11
7.1	Research Advisory Board.....	11
7.2	Research Department .....	12
7.3	Researchers working in the Departments and Centres.....	13
7.4	Schools .....	14
8	EXPECTED OUTCOMES .....	14
8.1	Indicators.....	15
9	KEY TERMS .....	18

## 2 INTRODUCTION

According to the Strategic Plan for the Development of the Republic of Kazakhstan through 2020 (Decree of the President of the Republic of Kazakhstan #922, 1<sup>st</sup> February 2010) the network of 20 Nazarbayev Intellectual Schools (hereafter the ‘Schools’) is acknowledged to be one of the key projects contributing to the modernisation of the secondary education system in Kazakhstan. To fulfill this objective the schools serve as experimental sites for the development, monitoring, researching, analysing, introduction and testing of innovative educational programmes and technologies for kindergarten and pre-school, as well as educational programmes for school education (Law of the Republic of Kazakhstan No.394-4, 19<sup>th</sup> January 2011).

NIS AEO has been tasked to combine the best traditions of Kazakhstan education, and international best practice. Starting from 2015, the programmes, practices and expertise of NIS AEO will be disseminated to mainstream schools (‘State Programme for Education Development (SPED) for 2011-2020’, A Decree of the President of the Republic of Kazakhstan #1118, 7<sup>th</sup> December 2010).

The 2020 Strategy approved by the decision of the Supreme Board of Trustees of the NIS AEO on 18<sup>th</sup> April 2013 outlines the importance of scientific support to inform NIS innovations and decision making by the best available research evidence.

The rationale behind the present Research Development Framework is as follows:

- i. to give coherence to research, evaluation and monitoring work;
- ii. to provide an effective organisational structure for the management of research;
- iii. to build research capacity;
- iv. to assure the quality of the work carried out; and,
- v. to conduct ethical research.

For convenience sake, this document will use the word 'research' to refer collectively to research, evaluation and monitoring.

### 2.1 International Developments in the Field of Educational Research

Educational research is considered to be an integral function of university schools of education, and state and private educational institutions. In highly-developed countries, research is fully integrated into the activities of educational institutions, and thereby facilitates the development of knowledge about education and economic development, and ensures that innovation and the improvement of the educational process is based on evidence. (BERA, 2012)

## **2.2 National Developments in the Field of Educational Research**

The Government of Kazakhstan is very keen that all government agencies conducting research have common aims, and focus on creating recommendations from research, which will aid the country's economic development, growth and wellbeing.

Kazakhstan's potential for scientific research, including field of educational research, should also be developed and should facilitate integration into international academia. To this end, the Government of Kazakhstan is increasing funding to scientific organisations and promoting applied research.

Under these circumstances, in 2013, the Kazakhstan Educational Research Association (KERA) was founded. The principal aims of the Association include the coordination of all educational research work conducted by Kazakhstan researchers, and dissemination of the results nationally and internationally.

## **2.3 Review of the Current Situation at Nazarbayev Intellectual Schools**

Innovations and reforms taking place at Nazarbayev Intellectual Schools include: the development and implementation of a new skills-based educational programme (extending to primary school level); the welfare and wellbeing of students; trilingual education; intensive language learning; functional literacy; criteria-based assessment of students' work, and a new model of summative assessment for school-leavers; new era textbooks and digital educational resources; continuing professional learning and teacher development (action research, lesson study, and team teaching); and, the creation of a contemporary educational platform and so on.

The process of implementing innovations and reforms should be accompanied by monitoring and evaluation, conducted by NIS AEO together with its international partners. The interpretation of the data collected and its use in improving practice

requires deep analysis. In order to conduct such analysis, the research capacity of the organisation should be developed.

## **2.4 Legal Documents**

The Research Development Framework has been developed with reference to the following legal documents:

- Education Act 2007, 27<sup>th</sup> July 2007, No. 319-III;
- Law on the Status of Nazarbayev University, Nazarbayev Intellectual Schools and the Nazarbayev Foundation, 19<sup>th</sup> January 2011, No. 394-IV; and,
- NIS 2020 Strategy, approved by the High Board of Trustees, 18<sup>th</sup> April 2013.

## **3 AIMS AND OBJECTIVES**

### **3.1 Strategic Aim of the Research Development Framework**

This Framework proposes an approach to the fulfilment of the commitment in the 2020 Strategy to informing NIS AEO innovations and decisions by the best available research evidence and of its obligations to monitor and evaluate its ongoing programme of reform.

### **3.2 Objectives of the Research Development Framework**

The primary objective of the Framework is *the improvement of policy and practice*, and helping NIS AEO fulfil its mission and vision. Conducting research will help the organisation improve its educational services to students, teachers and the educational community in Kazakhstan.

The secondary objective is *contribution to international research* in the field of educational reform.

## **4 PRINCIPLES FOR CONDUCTING RESEARCH**

The present Framework mandates an approach to research that is:

### Rigorous

- *a consistent, methodical approach, working systematically, covering topics comprehensively*

### Critical

- *self-aware and self-critical, conscious of one's and others' foundational assumptions, grounded*

### Transparent

- *intentional openness, having scrutable methodologies and processes, elements of replicability*

### Ethical

- *holding to ethical norms in research, respecting rights, consensual, preserving anonymity, intellectual honesty*

### Humane

- *recognising others' humanity, respecting the individual and the social, possessing social intelligence, rootedness*

## **5 RESEARCH ACTIVITIES AND RESEARCH PLANNING**

The present Framework determines the following research activities, areas and overall stages of development.

### **5.1 Research Activities**

The work covered under the Research Strategy includes:

- Developing and implementing an NIS AEO monitoring system (monitoring – in the sense of enabling NIS AEO to track progress within its spheres of activity, for example, whether initiatives are keeping to schedule, whether targets are being reached, students' progress through the system and achievements on exams);

- Developing and implementing an NIS AEO evaluation system (evaluation – in the sense of enabling NIS AEO to understand what is happening as a consequence of its initiatives, how these are perceived at different points in the system, what impact they are having i.e. to provide NIS AEO and other stakeholders with a basis for judging its success or otherwise);
- Conducting and commissioning educational research (research – in the sense of enabling NIS AEO to have a “systematic and sustained” basis of inquiry into targeted features of the educational system and its role in it); and,
- Developing the Shared Educational Statistical Database (SESD) compliant with international requirements and in a form that is secure against inappropriate access as well as readily accessible and searchable by those entitled to do so.

## 5.2 Research Areas

The following areas have been identified as the initial focus for research.

- Educational quality
- Curriculum
- Trilingual education
- Teaching and learning
- Student attainment
- Preschool education
- Student assessment
- Student welfare and wellbeing
- Teacher education and development
- Teacher evaluation and appraisal
- School culture and climate
- Educational technology and resources
- School leadership and management
- School assessment and accreditation
- Dissemination

The above foci will require further elucidation through a NIS Research Action Plan.

NIS Department, Centres and Schools may conduct research on the basis of their ongoing work and needs.



### **5.3 Research Planning**

The Research Development Framework foresees three initial stages of the development of the research capacity of NIS AEO:

#### *Stage One*

In 2015, NIS AEO will seek to build research capacity, initiate research projects; conduct evaluation and preliminary planning for monitoring; support the improvement of SEDS; and, commence its research communication activities.

#### *Stage Two*

From 2016-2017, NIS AEO will start to conduct joint research projects with external partners; integrate further into the international educational research community; provide research methodology training sessions; and, build a research culture in schools.

#### *Stage Three*

From 2018-2020, NIS AEO will conduct major research projects in Kazakhstan education; monitor and evaluate all aspects of its work; participate in policy discussions at a national and international level; and, represent a significant voice in international educational research.

## **6 PRINCIPAL MECHANISMS FOR IMPLEMENTING THE FRAMEWORK**

The following mechanisms shall be used to implement the Framework:

### **6.1 Capacity Building**

Capacity building invites the support of international organisations but eschews dependency upon them.

NIS AEO already has staff qualified by education, training and experience to conduct research on its behalf. An early task is to conduct an audit of this capacity. In addition, there are NIS staff who are currently studying at Masters level and for PhDs both in

Kazakhstan and internationally. Their research and developing skills should also be part of the audit.

Capacity building means learning research methodologies and creating research projects together with international partners, taking into account the needs of the organisation.

## **6.2 Developing Cooperation between Central Management, Centres and Schools**

A series of joint research projects between NIS Departments, Centres and Schools is proposed in order to build cooperation towards and create a unified approach to conducting research,

A Regional Research Forum is planned in order to exchange experiences and disseminate the results of the research conducted.

## **6.3 Developing Cooperation between NIS and Research Organisations**

To develop high-quality research, NIS AEO is partnering with national and international academic and scientific organisations, and researchers on the following:

- joint research projects;
- inviting external researchers to conduct research on NIS areas of concern;
- support for external researchers in conducting research on NIS; and,
- participation in academic conferences and other events.

## **6.4 Development of the Statistical Database**

In order to make judicious and effective use of extant data, it is proposed that the existing Shared Educational Statistical Database (SESD) be developed. The SESD will allow for organisational development, and the oversight and implementation of educational reforms.

## **6.5 Communication**

Communication of research and knowledge should not be an afterthought, but rather should aim towards ‘knowledge mobilisation’. To this end, the following measures are intended:

- Publication of a monthly research bulletin;
- Publication of reports on research findings;
- Improving access to the SESD;
- Release of a monthly digest on the work of the Research Department;
- Consultation and support from the Research Department on preparing materials for publication, and participation in national and international seminars and conferences;
- Publication of academic articles in national and international academic journals;
- Publication of popular articles in national and international journals and mass media;
- Creation of the website, <http://research.nis.edu.kz>, with a wide range of information on research conducted, guidance on research and publication, and data;
- Dissemination of the results of research via social media;
- Seminars and training sessions on research methods; and,
- Organisation of the annual International Conference, and Regional Research Forum.

## **7 RESEARCH GOVERNANCE**

Research is overseen by the Research Advisory Board and coordinated by the Research Department.

### **7.1 Research Advisory Board**

The Research Advisory Board (hereafter, the Board) advises and supports the conduct of research, and likewise provides an evaluation of the quality of research conducted by NIS and external organisations working in the Schools.

The Board supports the development of ties with the educational research community within and outwith Kazakhstan.

The Board will consist of the following members:

- a Chairperson;
- a Deputy Chairperson (the NIS Deputy Chairperson);
- a Secretary (a member of the Research Department);
- representatives of the Kazakhstan research community;
- representatives of the international research community; and,
- the Director of the Research Department.

At the development stage, the Board may consist of fewer than 12 members.

Board Meetings shall take place twice a year, and at other times, the Board shall conduct its activities online.

The functions of the Board are as follows:

- Referee or nominate referees for research or evaluation projects and reports;
- Advise on issues arising with respect to the ethical conduct of research;
- Advise on the ongoing development of NIS AEO research/evaluation strategy;
- Advise on matters of research capacity building;
- Receive and respond to an annual report from the Research Department;
- Respond by mutual agreement to other requests from NIS AEO for technical advice on research and evaluation; and,
- Support as far as it is able the development of a strong research culture in the organisation.

## **7.2 Research Department**

Coordination of research activities is one of the primary functions of the Research Department. Other functions include the following:

- Coordinate NIS AEO Departments and Centres in identifying research priorities;
- Develop the SESD in cooperation with other NIS Departments and Centres;
- Maintain protocols for conducting research in Schools (Appendix 2);

- Commission research from local and international organisations based on the principle of collaboration and building local capacity;
- Support capacity building and experience exchange between the NIS AEO Departments and Centres, and external agencies engaged in educational research;
- Develop the NIS Library (books, local journals, and access to online international journals in Russian and Kazakh);
- Ensure access to appropriate electronic resources to organise and support research activities (specialist research and statistical software, and hardware e.g. EndNote, NVivo, Atlas Ti, SPSS etc.);
- Coordinate access to internal and external research on NIS AEO;
- Ensure availability of main research results in Kazakh, Russian and English and support transfer of knowledge and research results to wider educational system in Kazakhstan and internationally including the publication of research results in local and international journals;
- Establish platforms (seminars, workshop, conferences, online communities) for constant engagement in dialogue and communication within NIS AEO, wider education system in Kazakhstan and engage in international discourse about education;
- Ensure usage of appropriate language to communicate research result to different interested stakeholders (policy briefs, executive summary, journalism etc.);
- Contribute to the building of a research culture in NIS which is collaborative and mutually supportive but also open, questioning and critical; and,
- Maintain and implement the Code of Ethics (Appendix 1).

### **7.3 Researchers working in the Departments and Centres**

In conducting research, it is recommended that NIS Departments and Centres do the following:

- Take into consideration research in planning and developing policy and programs;
- Identify a member of staff who can coordinate research work within the Department or Centre, and coordinate that activity closely with the Research Department;

- Facilitate the development of staff members' potential and competency in conducting research and provide all necessary support to them; and,
- Coordinate research work with other Departments and Centres on a basis of openness and mutual trust.

## **7.4 Schools**

In the present Framework, the Schools are the primary subject of research and are expected to do the following:

- Provide all statistical data requested for the SESD;
- Conduct practitioner research at teacher, school or interschool level;
- Present, publish and share the results of practitioner research;
- Provide access to the School to researchers as per the instructions in Appendix A and B; and,
- Report on any errors or infringements of the Code of Ethics encountered whilst conducting research.

## **8 EXPECTED OUTCOMES**

The implementation of this Framework will provide for:

### *An intelligent organisation*

The development of NIS AEO into an organisation capable of conducting research, evaluation and monitoring to a high standard, and whose work is routinely informed by evidence from its own research and the work of the wider educational research community.

### *Research capacity*

The development of a team of professionals capable of conducting research, recording and maintaining data in the SESD as per international standards, and working with the latest technologies and protocols for conducting research.

### *Analytical reports*

NIS AEO Departments and Centres will be provided with research evidence relating to key areas of their own activity and achievement.

### *An improved educational process*

If this evidence is used properly to inform ongoing work, the ultimate benefit will be in improved programmes of reform, improved teaching and learning, and higher levels of achievement for students both in NIS schools and in Kazakhstan education more generally.

## **8.1 Indicators**

<b>Indicator</b>	<b>By 2015</b>	<b>By 2017</b>	<b>By 2020</b>
<b><i>An intellectual organisation</i></b>			
Creation of a Research Capacity Building Team	10 members	15 members	20 members
Creation of research teams in schools	10% teaching staff members	20% teaching staff members	30% teaching staff members
Research Projects ongoing or completed	2 research projects ongoing or completed	6 research projects completed	12 research projects completed
Research projects with local partners		2 research projects completed	4 research projects completed
Research projects with international partners		1 research project completed	2 research projects completed
External researchers conducting research at NIS		5 external researchers brought in	10 external researchers brought in
<b>Research capacity</b>			
Capacity Building Database	Creation of the Database	Completion of the Database	Launch of the Database

<b>Indicator</b>	<b>By 2015</b>	<b>By 2017</b>	<b>By 2020</b>
Regional Research Forum		Held annually	Held annually
Seminars and training sessions on research methods for Departments, Centres and Schools		2 training sessions held annually	3 training sessions held annually
Seminars and training sessions on research methods for external partners, e.g. educational colleges research teams	1 training session started	2 training sessions held	4 training session held
Provision content of the International Conference	Annually	Annually	Annually
Action research used to improve practice.	200 action research projects	400 action research projects	600 action research projects
<b><i>Analytical Reports</i></b>			
Development of the SESD	Preliminary work and meetings	Reworking of data protocols	Launch of improved database
Set of values and indexes for evaluation and monitoring of pedagogic activity of certified teachers		Developed	Developed
Analytical reports on the evaluation results for information and managerial decision making with a purpose of activity	2 analytical reports	6 analytical reports	10 analytical reports



<b>Indicator</b>	<b>By 2015</b>	<b>By 2017</b>	<b>By 2020</b>
improvement and development planning in the Intellectual Schools are available to whom it may concern			
Establishment of a monitoring system		Establishment	Dissemination
Policy recommendations delivered to Departments and Centres	2 executive summaries	6 executive summaries	12 executive summaries
<b><i>Dissemination and Outreach</i></b>			
Publication of an Annual Research Report	Annually	Annually	Annually
Publication of a Quarterly Digest on the work of the Research Department		Annually	Annually
Publication of academic articles in international journals		4 academic articles	10 academic articles
Publication of popular articles and journalism in local and international educational journals and mass media	1 article	6 articles	12 articles
Creation and development of a website with a large quantity of research-related materials, <a href="http://research.nis.edu.kz">http://research.nis.edu.kz</a>		Launch	Development

## 9 KEY TERMS

The following are contested terms even in English, and in translation, fall into different conceptual structures and take on subtly different meanings, so should be used with caution.

**Research** has been defined as ‘systematic and sustained inquiry made public’ (Stenhouse 1975). It draws its ‘systematic’ character from the established disciplinary forms of the academy. It is ‘sustained’ in the sense that it is careful, thorough, requires consideration, reflection and discussion and it takes time. It is ‘made public’ not just because it serves a wider population but it achieves an important part of its credibility and validity by being exposed to criticism by researchers’ peers and wider groups of stakeholders. Research that aspires to publication in the best international and local journals would be expected to have a theoretical framing and to engage questioningly and critically with its subject.

**Monitoring** is the routine collection of data selected to keep one informed about the working and/or progress of a particular system, rather as one watches the dials on the dashboard of one’s car. Data collected for monitoring purposes may assist evaluative judgments about success or failure, and the selection of what features of a system to monitor may be guided by the requirements for evaluation, but it does not in itself constitute an evaluation.

**Evaluation** is understood in two rather distinct ways. The first is to think of evaluation as inquiry designed to provide data seen as relevant for informing judgements by stakeholders of the success or failure (or value or otherwise) of an initiative or educational reform. In this case, the evaluation itself is agnostic with regard to the normative judgements which are made. In the second case the evaluation provides not only the evidence to inform judgement but the judgement itself. Whichever approach is taken, the wise evaluator is careful to distinguish the empirical and the more strictly evaluative components of the task.

**Practitioner research** refers to research conducted by practitioners - whether they be school teachers or administrators - usually into areas of their own practice. It may be carried out individually or collaboratively, sometimes with support from university academic researchers.

**Action research** is a particular form of practitioner research, which has as its focus some aspect of the practitioner's own practice, normally something problematic. This understanding leads to a change in practice whose consequences are observed and evaluated. The initial problem is then seen to be resolved or unresolved, and the process may thereafter be repeated. In its fullest sense, therefore, action research is an ongoing cyclical activity.

**Shared Educational Statistical Database** (*Russian: eIOS*) is a database containing all statistical data collected according to agreed indicators compliant with the National Centre of Education Statistics and Evaluation's (NCESE) and international requirements (UNESCO, OECD) at NIS AEO.