AUTONOMOUS ORGANIZATION OF EDUCATION
NAZARBAYEV UNIVERSITY

INSTRUCTIONAL TECHNOLOGY STRATEGY OF THE AUTONOMOUS ORGANIZATION OF EDUCATION "NAZARBAYEV UNIVERSITY" 2014-2016

Approved by the resolution of the Academic Council of
the autonomous organization of education "Nazarbayev University"
Minutes #*14* of *19. 11. 14*

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INSTRUCTIONAL TECHNOLOGY STRATEGY OF THE AUTONOMOUS ORGANIZATION OF EDUCATION "NAZARBAYEV UNIVERSITY" 2014-2016

Overview

1.   This Strategy is the first attempt of the Nazarbayev University to define its strategic priories in the area of instructional technologies for 2014-2016. The Strategy was developed in 2014 as a collaborative effort of the NU Instructional Technology Subcommittee of the Academic Council consisting   of representatives of Schools, Faculty Senate, NU Library, and students and led by the Head of Instructional Technology. The wider consultation process involved faculty in Schools and deans.

I.   Introduction

2.   The autonomous organization of education Nazarbayev University (NU, 2014) has ambitious plans to become a world class institution, providing high quality education to NU students, enabling innovative teaching methodologies, and faculty and students to contribute to reform, modernization, and informatization of the education system of the Republic of Kazakhstan.

3.   We believe that *technology-enhanced* learning, teaching, assessment and research will empower NU community to take forward the strategic goals of the University and facilitate NU in achieving its ambitious aims. Currently, there are many instructional technology initiatives and activities taking place at NU, however their scope and status vary in focus and direction.

4.   Though instructional technology developments vary from School to School (see Appendix A for current instructional technologies used at NU), taken together they are seen as contributing to the elements of improving the student learning experience that NU has nurtured and advanced. Instructional technologies, when appropriately used and supported, can enhance and complement current educational practices. These include:
    1)   personalize learning;
    2)   contribute to accessibility of learning materials;
    3)   engage students in collaborative learning by improving peer-to-peer communication;
    4)   improve and expand the level of feedback to students;
    5)   enhance and facilitate the assessment process;

6)   provide extended opportunities and access to learning materials in various formats both on campus and off campus;

7)   help focus, intensify, and enrich students' preparation for classroom activities;

8)   facilitate students' acquisition of essential skills;

9)   facilitate learning for students with various learning needs;

10)   offer tools with the potential to simplify administrative tasks for faculty and other staff.

II.   Aims of the NU Instructional Technology Strategy 2014-2016

5.   To identify the direction and scope of our actions in the area of instructional technologies, we devised the *Nazarbayev University Instructional Technology Strategy 2014-2016*, which:

1)   engages all faculty, staff, and students at NU;

2)   is based on NU strengths, intellectual potential, and material assets;

3)   communicates ambitious but realistic goals;

4)   provides value to all stakeholders both in the University and citizens of Kazakhstan;

5)   is affordable and sustainable;

6)   is scalable and duplicative.

6.   For this Strategy, we refer to instructional technology as the theory and practice of design, development, utilization, management, and evaluation of processes and resources for learning. The new Nazarbayev University Instructional Technology Strategy is informed by:

1)   NU Operational Plan;

2)   NU graduate attributes;

3)   Current developments in research and practice pertaining to learning and teaching enhanced with technology;

4)   Republic of Kazakhstan strategic initiatives to include, but not be limited to e-Learning Program, State Program of Education Development in the Republic of Kazakhstan for 2011- 2020, Information Kazakhstan—2020.

7. Building on the NU vision for learning and teaching, we:

1)   place the quality of each student's learning experience at the center of all our activities;

2)   develop, support, value, and reward excellence in teaching;

3)   enhance the relationship between teaching, research, and scholarship to benefit students' learning;

4)   ensure that our students have the skills necessary for success in learning, personal development, and employment;

5)   contribute to and support the internalization of the University;

6)   engage in educational outreach;
7)   provide Kazakhstani and international students with a range of study options that meet their particular learning needs.

8.   Our Strategy aims to support achievement of University strategic priorities through:
1)   embedding instructional technology institutionally
2)   faculty and staff capabilities in using new and emerging technologies effectively and efficiently
3)   quality assurance and enhancement
4)   accessing, sharing, and reusing e-resources
5)   use of virtual learning environment (VLE) and other e-learning tools to support blended and distance learning provision and to improve learning experiences, retention, and progression of our students

9.   To help us achieve our strategic aims, we have a vision for instructional technology developments at Nazarbayev University.

III.   Vision of the NU Instructional Technology Strategy

10. The NU Instructional Strategy strives to realize the following **vision**:

To become an innovative and forward thinking research University where instructional technology is used to enhance and personalize student learning experience and to improve the support of learning, teaching, and assessment providing the opportunity to create an innovative, flexible, and accessible learning environment focused on the needs of our learners and aspirations of our faculty and staff.

11.   Instructional technologies and methodologies will be embedded into a range of teaching and research approaches used by faculty and staff, as well as in the learning and student support activities of non-academic staff, and NU policies and practices. This will ensure that the programs can be delivered by utilizing the most appropriate teaching methodologies for students to achieve the targeted learning outcomes, support employability and lifelong learning, and foster an environment in which creativity and innovation in teaching and learning is encouraged and aid to maintain and advance NU teaching excellence and research.

IV. Strategic Priorities and Focus Areas

12. For the period **2014-2016**, we would like to focus on the following **three strategic priorities**:

1) Prepare NU students to learn, work, lead, and succeed in a technology-enhanced world.

2) Provide appropriate and pedagogically-sound technologies that promote learning that is personalized and emphasizes creativity.

3) Empower, inspire, and support faculty in their efforts to enhance learning, teaching, assessment, and research with technology.

§1. These strategic priories are described below.

13. Prepare NU students to learn, work, lead, and succeed in a technology-enhanced world

In this strategic priority the focus is on:

1) Fostering of student independence, self-motivation, integrity, academic excellence, critical thinking, global awareness, creativity, collaboration, and employability. This is in addition to knowledge of their subject areas and the skills to acquire and utilize in their further studies, employment, and career advancement.

2) Embedding instructional technologies university-wide, into all NU policies and practices and all aspects of student experiences, including student support and the management of learning.

3) Using instructional technologies to complement and enhance traditional teaching methods to support and advance student personalized learning and prepare Nazarbayev University graduates, in accordance with our graduate attributes, for demanding and highly competitive careers both nationally and internationally.

4) Utilizing appropriate technologies and methodologies to enrich nu learner-centered, research-integrated, and internationalized learning and teaching environment.

5) With the Nazarbayev University still growing, advocating for the construction of modern learning spaces enhanced with technology to promote active learning, collaboration, innovation, and creativity.

Implementation plan will be furnished after approval of the Strategy.

14. Provide appropriate and pedagogically-sound technologies that promote learning that is personalized and emphasizes creativity.

1) We believe that instructional technology should always be driven by pedagogical considerations, not the demands and availability of tools and technologies themselves. Student learning and pedagogical needs, and not

technical possibilities, must drive the use of learning technology. We recognize, appreciate, and celebrate the diversity of teaching practice at NU. Instructional technology must be considered and developed as an integral part of teaching in the same way as other methods are (e.g., lectures, tutorials, labs, and seminars) and, therefore, linked with innovative teaching methods, learning outcomes, and assessment aims.

2)   The adoption of innovative practices and emerging technologies will lead to and be affected by the emergence of new types of course design and development and new kinds of arrangement for contact-time between faculty and students without compromising the quality of learning and teaching. The NU Instructional Technology Strategy is not concerned with imposing models of practice or procedures on members of the University academic community. The potential, student learning experiences, actual teaching quality gains, and achievement of learning outcomes of any instructional technology development and enhancement will be always taken into consideration. We will use various technologies to produce more interactive, collaborative, and independent environment for learners and to help strengthen the links between teaching and research. (Technologies and resources outlined in Appendix B by no means form an exhaustive list of possible technologies.)

Implementation plan will be furnished after approval of the Strategy.

15.   Empower, inspire, and support faculty in their efforts to enhance learning, teaching, assessment, and research with technology

Empowerment and support of faculty is *one* critical endeavor among many that are essential for their success in academic career.

Guided by NU strategic documents, we will:

1)   Contribute to capability building of faculty and academic staff by providing comprehensive, systematic, timely, user-friendly, and high quality support for technology-enhanced teaching.

2)   Provide resources and support for faculty to experiment with programs, technology, digital communities, and various innovative means, as they lead the way in transforming higher education.

3)   Initiate instructional technology research and enhance research-informed teaching.

4)   Adopt strategic approaches to technology in learning and teaching.

5)   Create challenging and supportive environment for faculty to pilot their innovative technology-enhanced projects, evaluate tools, and make informed judgments about their appropriateness for learning and teaching.

6)   Support faculty and staff using instructional technologies and innovative methodologies through induction and regular professional development activities in various formats.

7)   Nurture an instructional technology community of practice across NU Schools and units.

8)   Recognize and showcase achievements of instructional technology enthusiasts, student generated digital content, and collaborative work on technology-enhanced projects.

Implementation plan will be furnished after the Strategy approval.

V.   Critical Success Factors for the Strategy Implementation

16.   Nazarbayev University will realize its vision for instructional technology and its aims for learning and teaching through continually making instructional technology development one of the NU priorities and addressing the following issues:

17. Our instructional technology infrastructure meets the needs of our students, faculty, and staff, develops appropriately in line with these needs, and is well maintained. This aim can only be achieved if the University:

1)   Provides and sustains the technical infrastructure including teaching and learning technologies - both software and hardware - and appropriate technical support.

2)   Provides and sustains an appropriate infrastructure to enable reliable and effective access to online information, materials and web resources on campus; and also provides faculty and students with appropriate off-campus access to its network.

3)   Endeavors to provide, sustain, and support appropriate and sufficient physical infrastructure (i.e. technology enhanced classrooms, specialized labs, and modern learning spaces) to improve access to instructional technology and to meet faculty, staff, and student needs and expectations.

All of the above objectives will require additional resources both to sustain present activity and to develop it further to achieve the implementation of this Strategy.

18.   Instructional technology becomes an integral and embedded part of future NU Learning and Teaching Strategy, Assessment Strategy, and Research Strategy to strengthen the link between teaching and research. This aim can only be achieved if the University:

1)   Supports the implementation and 'mainstreaming' and 'normalizing' of proven technologies through the provision of centralized technical and pedagogic services and the allocation of adequate resources to fund systems through appropriate budgets.

2)   Encourages a more strategic approach to the development and implementation of instructional technologies at School and program levels as an integral part of School's strategic plans.

3)   Establishes formal mechanisms for the effective piloting and evaluation of tools, technologies, methodologies, and techniques with University-wide application.

4)   Uses the NU Instructional Technology Strategy as a University-wide model for describing the pedagogic approach when instructional technology is adopted, and provides supporting mechanisms to enable Schools and programs to embed instructional technology into their learning and teaching strategies.

The above objectives raise a variety of issues including the need for more support staff, appropriate staff qualifications, and the targeted management of academic staff and faculty time in order to create technology-enhanced materials, develop skills, use them effectively in teaching, and conduct research.

19.   To provide necessary and appropriate support and recognition for faculty and staff involved in using instructional technologies and to encourage teaching innovation and ensure the successful implementation and dissemination of technologies. This aim can only be achieved if the University:

1)   Provides central support for instructional technologies through the Instructional Technology Unit, IT Services, the NU Library, and related support services by strengthening and supporting their resources and functions.

The overall responsibility for the development of instructional technology across the University will remain with the Instructional Technology Unit, with its role to provide Schools with coherence and focus in the development of technology-enhanced learning and teaching as well as stimulate and drive such developments.

Instructional Technology Unit will offer advice and support concentrating on the pedagogical issues of instructional technologies, whilst NU Information Technology Services will offer technical support in running and maintaining the tools and IT facilities.

The Instructional Technology Unit will employ learning technologists and instructional designers in order to stimulate, drive, and support the pedagogical use of instructional technologies within subject disciplines as well as to disseminate good practice.

2)   Supports faculty and staff to develop appropriate skills in instructional technologies that will cover both pedagogical and technical aspects through comprehensive professional development opportunities and other practices. Instructional Technology Unit, Learning and Teaching Subcommittee, and IT Services will continually evaluate training needs and adapt the faculty and staff development program accordingly.

3) Ensures that adequate recognition is given to instructional development work and technology usage through the promotion process and other forms of rewards.

4) Develops, disseminates, and shares good practice in the use of technologies in teaching and learning by continuing to support existing mechanisms and establishing new ones, as appropriate.

5) Supports students to use instructional technologies and tools, specialized facilities, and to develop appropriate skills as an additional study skill.

6) Encourages and helps faculty and staff to engage in the evaluation of and pedagogical research in instructional technologies.

7) Encourages collaboration between Schools and subject communities within the University and externally.

20. To capitalize on the potential offered by instructional technology by extending its role in the support and enhancement of the student experience, the University's outreach activities, internationalization, and lifelong learning. This aim can only be achieved if the University:

1) Encourages the move from primarily text-based programs towards technology-enhanced materials, blended, and/or fully online delivery.

2) Incorporates instructional technology opportunities and benefits for the students (e.g., VLE, computer facilities, assessment center, hardware and software, e-resources) in the recruitment and marketing of our programs in an appropriate and sustainable way.

3) Develops and/or implements appropriate instructional technology systems/mechanisms to support students' personal development and career advancement.

4) Considers the role of instructional technology in providing constructive individual feedback and targeted support to students in support of the University's work to improve the retention rates, and the potential development of pre-entry activities and support.

5) Considers the role of instructional technologies in the University's relations with potential employers in support of the development of our students' employability and career advancement.

6) Supports the development of instructional technologies to enhance opportunities for lifelong learning and success of our students in competitive markets.

All the above objectives have implications for resources, and managerial implications in respect of collaboration between different Schools, Units, and Services.

VI. Relationship to Other University Strategies and Initiatives

21. Whilst pedagogical issues will drive developments in the area of NU instructional technologies, the creation of technology-enhanced environment for learning and teaching will influence and be influenced by other NU strategies, those in existence and those that are still under development (to include but not to be limited to Teaching, Learning and Assessment Strategy, Academic Quality Framework, IT Strategy, Infrastructure, Faculty Professional Development and Enhancement, Estate, Web, etc.) as well as University policies in areas such as student support services, libraries, and others. As the implementation of this Strategy will have staffing and funding implications, it needs to inform and be informed by strategies and developments in other areas. Furthermore, in the context of the University's resources and competing priorities, Schools and Services have to work together to ensure that common strategic areas are covered and to understand the funding and staffing implications and how these can be supported.

VII. Strategy Implementation and Evaluation

22. Responsibility for the development of this Strategy rests with the NU Instructional Technology Unit. The Head of Instructional Technology in collaboration with the Instructional Technology Subcommittee (representatives of Schools, non-academic units, NU Faculty Senate, students, etc.) will develop and propose a full Strategy implementation plan and outline operational plans, with specific objectives, target outcomes, and clear allocation of areas of responsibility to persons/groups within the University. The NU Instructional Technology Subcommittee will assume responsibility for:
1) Coordinating strategy-related activities by bringing together key members of the University.
2) Monitoring and reviewing progress.
3) Advising the NU Academic Council, Research Council, and Managing Council of resource requirements for implementing the current Instructional Technology Strategy.

VIII. Final Provisions

23. This Strategy should not be viewed as a prescriptive document. It is more of a general outline of the scope and aims of NU in embedding instructional technologies, tools, techniques, methodologies, and actions needed to achieve NU vision.

24. It is anticipated that instructional technologies and e-learning will grow rapidly to become an essential part of NU provision for learning, teaching,

assessment, and research. We envisage that instructional technologies will have become embedded in the University's normal educational activities. As the Strategy develops over the next few years, it is anticipated that the vision and the aims of this Strategy will become embedded in future iterations of the University's Teaching, Learning, and Assessment Strategy and NU strategic and operational plans.

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КЕЛІСУ ПАРАҒЫ /APPROVAL SHEET/ ЛИСТ СОГЛАСОВАНИЯ

«НАЗАРБАЕВ УНИВЕРСИТЕТІ» ДЕРБЕС БІЛІМ БЕРУ ҰЙЫМЫНЫҢ 2014-2016 ЖЫЛДАРҒА БІЛІМ БЕРУ ТЕХНОЛОГИЯЛАРЫН ЕНГІЗУ ЖӨНІНДЕГІ СТРАТЕГИЯСЫ/INSTRUCTIONAL TECHNOLOGY STRATEGY OF THE AUTONOMOUS ORGANIZATION OF EDUCATION "NAZARBAYEV UNIVERSITY" 2014-2016/СТРАТЕГИЯ ПО ВНЕДРЕНИЮ ОБРАЗОВАТЕЛЬНЫХ ТЕХНОЛОГИЙ

Item/ Атауы/ Наименование	Structural subdivision/ Құрылымдық бөлімшенің атауы/ Наименование структурного подразделения	Name and signature of a responsible person, date of approval/ Т.А.Ж., жауапты тұлғаның қолы, визаның қойылған күні / Ф.И.О., подпись ответственного лица, дата визирования	Position, name and signature of a resp. person, date of approval / Лауазымы, Т.А.Ж., нақты орындаушының қолы, визаның қойылған күні / Должность, Ф.И.О., подпись конкретного исполнителя, дата визирования
DEVELOPMENT/ ӘЗІРЛЕУ/ РАЗРАБОТКА	Office of the Provost/Head of Instructional Technology	Dina Vyortkina Nov. 25, 2014	Dina Vyortkina
Review/ Келісу/ Согласование	Legal Department / Заң департаменті / Юридический департамент	Bakyt Abisheva	25 Nov. 2014
	Department of Documentational Support/ Құжаттамамен қамтамасыз ету департаменті/ Департамент документационного обеспечения	Leila Nurgaziyeva	

Appendix A
Current Examples of Instructional Technology at NU

According to faculty survey conducted in 2013 and 2014, current examples of instructional technology at NU include, but are not limited to using:

1) Audience response system/clickers
2) Blogs, including video blogs
3) E-resources
4) Interactive multimedia tutorials
5) Interactive white boards
6) Mobile technologies
7) Moodle, as NU Virtual Learning Environment
8) Online assessment
9) Qualtrics survey management system and research suite
10) Specialized labs
11) Turnitin, teaching tool and plagiarism detection software
12) Video- and audio-conferencing
13) Video for instructional purposes

Appendix B
to the Instructional Technology
Strategy of the autonomous
organization of education
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Potential Technologies to Explore and Expand as Necessary and Appropriate

Virtual Learning Environment (VLE) Tools

We will use VLE to enable anytime, anyplace access to resources, enhance communication, and improve reporting mechanisms about student progress. Regular centralized professional development activities will precede any VLE innovations and introduction of new tools. Additionally, online resources and multimedia tutorials will be made available to faculty, students, and staff to support their adaptation of the VLE. Professional development topics will vary from basic introductions to more advanced usage of selected features and VLE tools.

Systematic and regular research activities on studying perceptions of students and faculty using VLE will be conducted to identify strong areas and areas for improvement. We will develop quality assurance standards and mechanisms for VLE course sites that can be used by faculty for self-assessment, peer observation, and other purposes.

Video and Audio Recording and Streaming

The Instructional Technology Strategy envisages the provision of facilities and infrastructure for conducting video and audio recording to capture lectures and events. Additionally, we will explore the opportunities for acquisition of commercial packages for the recording and dissemination of lectures and supporting materials both for on campus, part-time, and distance learning students.

Webconferencing (Audio and Video)

We envisage using these tools to enhance communication on and off campus; facilitate collaborative research activities with colleagues in the region and around the world; provide opportunities for guest lecturers, experts, or remote

tutors; facilitate other kinds of cross-campus or off-campus interaction that might accompany teaching and learning.

3D
We will explore 3D (images and video, scanning and printing, simulations, virtual worlds, games, etc.) to promote deeper learning and student engagement.

Simulations, Immersive Multimedia, and Virtual Reality
There is an increased level of interest in computer-based simulations, virtual reality systems, or parts of such systems at NU. It is foreseeable that demand for them will be made in an increasing number of cases over the next few years. We will organize resources and facilitate access to certain tools for our faculty, staff, and students.

Computer Assisted Assessment (CAA)
The pedagogical implications and possibilities of assessment enhanced with technology, and of the need for steps to ensure that these are appropriately designed and implemented, are currently under consideration in many Schools.

Mobile Technologies
We will work on providing formal and informal learning opportunities for students in the environment they spend a lot of time in communicating, playing, and working: mobile. We will identify the models most suitable for NU (BYOD, 1:1, or device carts) to engage students in learning, student to student, student to faculty, student to content, and student to outside resources communication.

Survey Management System
NU is a research-intense university. Centralized survey management system will greatly facilitate research efforts, ensure data safety and confidentiality, and additionally will enable faculty, staff, and students, to conduct surveys for business and operational purposes.

Turnitin
Use of Turnitin (teaching tool and plagiarism detection software) is on the rise. Though varying from School to School, the adoption of this system should be guided by academic requirements and NU-wide policies governing academic integrity, reporting mechanisms, dealing with offenders, and other related issues.

Personal Response System (PRS)
These devices (a.k.a clickers or audience response systems) were proven to be effective in both large and small classrooms in any subject area. Students will be able to provide responses related to the assigned readings, short quizzes, or any content discussed in class. Faculty will be able to receive immediate

feedback about student comprehension of new content and make informed decisions about further instructional activities.