

Institution: University of Cambridge		
Unit of Assessment: UoA23 Education		
Title of case study: Informing Systemic Education Reform in Kazakhstan		
Period when the underpinning research was undertaken: 2000-2020		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Bridges David	Director of Research (Kazakhstan)	2011 - 2015
James Mary	Professor	2008 – 2013
MacBeath John	Professor	2000 – 2006
	Director of Research	2006 - 2012
McIntyre Donald	Professor and Head of Faculty	2004 - 2007
McLaughlin Colleen	Director of Research	2016 to present
Mercer Neil	Professor	2006 - present
Opfer Darleen	Senior Lecturer	2005 - 2011
Pedder David	Senior Lecturer	2005 - 2010
Swaffield Sue	Senior Lecturer	2000 to present
Period when the claimed impact occurred: 2013-2020		
Is this case study continued from a case study submitted in 2014? No		
1. Summary of the impact (indicative maximum 100 words)		
<p>Research by Cambridge Faculty of Education has directly informed a substantial, national programme of educational reform in Kazakhstan between 2013 and 2020. The reforms drew upon a body of research evidence generated by faculty members; in turn these reforms are generating new research knowledge. Teacher development is a key element of reform. The effort is producing sustained improvements in outcomes in the Kazakhstan education system; these include teacher training and development, curriculum and pupil outcomes as judged by independent international bodies such as the Organisation for Economic Co-operation and Development (OECD). The programme has been the result of ten years of engagement by faculty members in Kazakhstan, with over 242 896 school teachers in mainstream secondary schools nation-wide participating in teacher development programmes between 2011 and 2018.</p>		
2. Underpinning research (indicative maximum 500 words)		
<p>The impact of Cambridge Faculty research on education reform in Kazakhstan draws upon a considerable body of work by a range of scholars, going back to early work from 2004 by McIntyre and continuing today with new research by contemporary scholars in the Faculty on the results and translation of what has been learnt, and continues to be learnt, from Kazakhstan. Groundbreaking work by McIntyre [R1] on teachers' development and understanding teachers' practice was then built upon by the work of Pedder and Opfer [R2], who systematically analysed international knowledge around teacher learning and developed frameworks to use in professional learning. James and Pollard [R3] developed ten principles for effective pedagogy from a synthesis of 100 projects and investments during the decade long large-scale ESRC Teaching and Learning Research Programme (TLRP), which researched the improvement of outcomes for pupils. Mercer's work on</p>		

dialogic teaching [R4] underpinned the approaches aimed at improving students learning through improving classroom talk.

Built around this core was research which emphasised teacher leadership and leadership for learning led by Macbeath (Macbeath, Dempster, Johnson, Swaffield, [R5]) as well as practitioner research as a major form of teacher development (McLaughlin et al, [R6]). This body of research was used to inform the sustained and evidence-based reforms which have taken place in Kazakhstan since 2013. In turn, the results of these country-wide educational reforms have generated a new body of research. Cambridge scholars are developing their knowledge of methodology, understanding how teachers 'change', the role of school directors, cultural practices, and the transferability of education reform practice in international settings (Bridges, [R7]).

The key impacts described here are directly attributable to research by Bridges and McLaughlin and colleagues [R8], which was commissioned by the Minister of Education, and which provided an analysis of the problems that the Kazakhstan education system needed to address in the next stage of its development in the period 2015-2020. The research clearly identified that the status and working conditions of teachers needed to be improved as did teacher education and professional training. In their report Bridges and McLaughlin [R8] provided recommendations for pre-school education; secondary education, equity and inclusion; teachers and teacher education; infrastructure and resources; management of change; technical, vocational and higher education.

3. References to the research (indicative maximum of six references)

R1 Hagger, H. and **McIntyre, D.** (2006). *Learning Teaching from Teachers: Realising the potential of School-based Teacher Education*. Maidenhead: Open University Press. Link [here](#)

R2 **Pedder, D., Opfer, V.D., McCormick R. and Storey, A** (2010). Schools and continuing professional development in England - State of the nation' research study: Policy context, aims and design. *The Curriculum Journal*, 21(4), 365-394. Link [here](#)

R3 **James, M.** and Pollard, A. (2011). TLRP's ten principles for effective pedagogy: rationale, development, evidence, argument and impact. *Research Papers in Education*, 26(3), 275-328. Link [here](#)

R4 **Mercer, N.** and Littleton, K. (2007). *Dialogue and the Development of Children's Thinking: A Sociocultural Approach*. London: Routledge. Link [here](#)

R5 MacBeath, J., Dempster, N., Frost, D., Johnson, G. and **Swaffield, S.** (2018). *Strengthening the Connections between Leadership and Learning: Challenges to Policy, School and Classroom Practice*. London: Routledge. Link [here](#)

R6 **McLaughlin, C.,** Black-Hawkins, K., and **McIntyre, D.** with Townsend, A. (2007). *Networking Practitioner Research*. London: Routledge. Link [here](#)

R7 **Bridges, D.** (Ed.) (2014). *Educational Reform and Internationalisation: The Case of School Reform in Kazakhstan*. Cambridge: Cambridge University Press. Link [here](#)

R8 *Development of Strategic Directions for Education Reform in Kazakhstan for 2015-2020: Diagnostic Report* (2014). Astana: Nazarbayev University. Link [here](#).

All research has been peer reviewed and therefore meets the 2* minimum requirement.

Details of the impact (indicative maximum 750 words)National Education Policy Reform

The State Programme of Educational Development in Kazakhstan adopted numerous recommendations from Bridges and McLaughlin since 2011 and throughout the impact period, most prominently in their five-year development plan for 2016-2020 [S1] and other strategic policy documents. These include

- Raising teacher status (all teachers)
- Improving the quality of teacher professional development (51 programmes, 242 896 teachers and 2365 trainers by 2018)
- New appraisal system based on a new model of the teacher and the task of teaching and learning (all teachers)
- Development of initial teacher education (with aid of World Bank loan)
- Implementation of renewed curriculum and increase to 12 years of schooling
- Change to five day working week from six (all schools)

Researchers met with political leaders and officials in Kazakhstan regularly during the period of reform, including private meetings with the Deputy Prime Minister and Minister. McLaughlin addressed the Parliament in 2017 on 'The State, Problems and Prospects of Legislative Regulation of the Secondary School System in Kazakhstan' [S2] and in 2018 Dr Winter informed the Vice Minister with a report on a National Qualification Framework. In 2017 the World Bank granted a loan to Kazakhstan for USD67,000,000 to improve rural and disadvantaged schools, with Professor McLaughlin appointed as technical adviser.

As a result of reform, Kazakhstan has moved up international league tables in teaching and learning outcomes. The Trends in International Mathematics and Science Study (TIMSS) shows a rise 'from 27th to 12th place in primary maths, 17th to 7th in secondary maths, 32nd to 8th in primary science and 20th to 9th in secondary science' [S3], [S4]. The OECD reported: '*Kazakhstan has invested much in improving the capacity and the learning conditions in its primary and secondary schools [S7], and the overall education picture is impressive [S5]. For teachers, new centres of excellence for pedagogical skills have been established in the NIS network and a three-tier system to train teachers was introduced to help them to upgrade their qualifications [S5].*

Implementation of the new curriculum across pilot schools resulted in an increase of +38.5 in test scores, including language and science achievement compared with +19.7 score increase in control group schools [S6b].

The NIS [S11b] reported: '*Cambridge Faculty of Education introduced several initiatives that have impacted substantial reforming of the education system in Kazakhstan, The ERI team's engagement in such spheres as teacher training and development, curriculum and student learning and wellbeing produced substantial improvements in outcomes.*'

Nazarbayev Fund [S11c] reported: '*Both [Professor Bridges and Professor McLaughlin] have contributed enormous amount of time and effort in supporting the reform in secondary education in Kazakhstan and contribute to the political discourse in the country.*'

Capacity Building

Cambridge Faculty built capacity to ensure reform would be sustained, including formal partnerships with two organisations founded to spearhead change; Nazarbayev University and a flagship network of 22 Nazarbayev Intellectual Schools (NIS). McLaughlin and Bridges joined the NIS Board of Trustees in 2016. Cambridge Faculty informed development of the Nazarbayev University Graduate School of Education (NUGSE) and advised on research projects for its PhD and MSc programmes, which are used to feed

into the Kazakhstan education ministry on the implementation of its reforms. It helped establish the Kazakhstan Educational Research Association (KERA) and a Research Advisory Board and Research Department in NIS, supporting both through board membership. These partnerships have resulted in NIS and NUGSE becoming world-class educational organisations, to which other countries in Central Asia (Turkmenistan, Armenia, Kyrgyzstan, Tatarstan Russia) refer to for advice and educational services [S6d].

Improving professional development

Cambridge Faculty partnered with NIS Centre of Excellence to design and implement a professional development programme linked to salary increases. This sought to address the low status of teachers, which was reflected in salaries and lack of training. This is internationally accredited and, according to the OECD [S7], ‘ambitious and empirically-based’. By end of 2016 the programme had reached around 700 trainers and 120,000 teachers. The Faculty is now replicating this success in the delivery of teacher training programmes in China and Pakistan.

In 2018, 98% of teachers in Kazakhstan participated in CPD, compared to the OECD average of 94% [S8]. 93% of teachers in Kazakhstan reported that they support each other in implementing new ideas, compared to OECD average of 78% [S9]. 59% of novice teachers in Kazakhstan had an assigned mentor as compared to 22% OECD average [S9].

Professor Isak Froumin, Head of the Institute of Education at the School of Economics in Moscow wrote, “Many would specifically recognize the major advisory role that the University has had in designing an advanced professional development framework, adapting and deploying global best practices within the Kazakhstan educational space” [S11a].

International impact and accreditation

The World Bank reported in 2017 on the Kazakhstan Education Modernisation project: ‘Working closely with the University of Cambridge and other international partners, the Center for Education Programs (CEP)...created a 12-year curriculum for the NIS schools, which have been using the curriculum since 2010. Innovative aspects ... include a competency-based design, focusing on cognitive skills that have not been traditionally targeted ...the MOES is adapting this curriculum for mainstream public schools and plans to introduce the adapted curriculum nationwide over the next six years.’ [S10]

Evidence of the growing reputation of NIS includes NARIC UK recognition of the NIS programme being equivalent to GCE A-Level and NIS Astana being authorised for the Diploma Program and Middle Years Program of International Baccalaureate [S6]. Cambridge University now accepts the NIS curriculum for entry to Cambridge and ten NIS have been accredited by the Council of International Schools. Four NIS Centre of Excellence programmes have been accredited by the Accreditation, Certification and Quality Assurance Institute (ACQUIN, Germany) [S6].

The National Commission of the People’s Republic of China awarded the University and NIS the prestigious 2019 Wenhui Award, coordinated by UNESCO Bangkok ‘Promoting University and School Partnerships in Advancing the Education 2030 Agenda’ for building ‘School-University Partnerships for Students’ Benefit’.

5. Sources to corroborate the impact (indicative maximum of 10 references)

S1 *State Programme of Educational Development in Kazakhstan for 2016-2020* (pp.43-47). Link [here](#) [original source document in Russian].

S2 Kazak Parliamentary session (2017). *Status, Problems and Prospects of Legislative Regulation of the Secondary Education System*. Astana.

S3 TIMMS: Bad News for Finland but Russia and Kazakhstan Soar: Trends in International Mathematics and Science Study Raises More Questions for PISA Star Finland. TES (p.2). Link [here](#).

S4 *The Trends in International Mathematics and Science Study (TIMMS) 2015 (p.15, 17, 27, 31) (p.17, 23) (p.17, 24)* International results in science and mathematics can be found online. Link [here](#).

S5 OECD (2016). *Multi-dimensional Review of Kazakhstan*. Volume 1. Initial Assessment. OECD Development Pathways, OECD Publishing, Paris. Link [here](#). Pp. 62-3, 66.

S6 NIS 2018 data gives evidence for the following:

- a) *The Diagnostic Test Results of Year 3 Learners across 30 Pilot and 16 Control Schools Within the Approbation of the Renewed Content of Secondary Education*. Presentation delivered at the NIS conference 'Next Generation Schools', 25-26 October 2018.
- b) *Educational programmes of the Centre of Excellence pass international certification*. Link [here](#).
- c) *Time for Change: 10 years of Nazarbayev Intellectual Schools*. AEO NIS. Astana Intellectual schools - the bridge between Kazakhstan and Turkmenistan. Link [here](#).

S7 OECD (2014). *Reviews of National Policies for Education: Secondary Education in Kazakhstan (p.177)*. OECD Publishing. Link [here](#).

S8 TALIS 2018: Supporting the teaching profession in a changing world: First results and key messages for Kazakhstan in an international perspective. – Keynote presentation delivered at the NIS XI annual International Research-to-Practice Conference *Researchers changing the world of schooling*, Nur-Sultan, 24-25 October 2019. Link [here](#).

S9 OECD (2019). *Results from TALIS 2018. Kazakhstan – Country Note (p.2,3)*. Link [here](#).

S10 The World Bank (2017). *International Bank for Reconstruction and Development Project Appraisal Document on a Proposed Loan in the Amount of US\$67 Million to the Republic of Kazakhstan for an Education Modernization Project (p.31)*. Link [here](#).

S11 Testimonials

- a) Letter from Head of the Institute of Education, Higher School of Economics, Moscow.
- b) Letter from Chairperson of AEO Nazarbayev Intellectual Schools.
- c) Letter from Chief Education Officer for Nazarbayev Fund.