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TRANSFERABILITY AND THE NAZARBAYEV INTELLECTUAL SCHOOLS: Exploring Models of Practice Transfer

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Introduction

The Nazarbayev Intellectual Schools (NIS) is a network of publicly funded schools across Kazakhstan that act as a beta site for innovation, experimentation and evaluation of educational practices (see Chapter 4). In the tradition of Dewey’s laboratory school they are to identify and model good practice. Once efficacy of a practice has been established it is to be transferred to the public schools of the nation. The purpose of this chapter is to examine ways in which other educational innovations have been purposefully shared with large numbers of schools in order to offer a framework to categorise different forms of dissemination or transfer, and to suggest which form is most suitable for NIS.

Context

The NIS schools share some common design principles. They are aspirant organisations that seek to have outcomes comparable to those of the best schools in the world. They are elite institutions that enroll less than 1% of the age cohort. The schools are intellectually selective and have a competitive entry process while aiming to be accessible to all segments of society. The entrance tests are available in both Russian and Kazakh, the schools are spread across the nation, many have boarding facilities and the schools are tuition free with meals, uniforms and lodging also free of charge.
In less than ten years from the opening of the first school, much progress has been made: an integrated academic programme has been developed in partnership with Cambridge International Examinations (CIE), an integrated trilingual strategy has been defined, and professional development courses have been designed and delivered by CIE and the University of Cambridge Faculty of Education. These and other new policies and programmes are at different stages of implementation. The next and immediate strategic question facing the NIS leadership and the Ministry of Education and Science (MoES) is how to transfer successful practice from an elite and well-resourced network of twenty schools to public schools nationwide.

**Spreading innovation**

The current literature on policy reform and innovation, despite being written from a variety of perspectives – be it a ‘developmental paradigm’ (e.g. OECD and World Bank), ‘neo-liberal imaginary’ (e.g. Ball 2012) or ‘policy borrowing’ model (e.g. Silova 2005 and Steiner-Khamsi 2004) – lacks a clear, articulated strategy for transferring policy into practice. This is in part due to a history of unsuccessful, partial or contested education policy transfers in national or regional settings and in part to conceptual ambiguity. This ambiguity is illustrated by the array of terms used to discuss the spread of innovation: the adoption or implementation of innovation, ‘going to scale’ and the metaphors from science and medicine such as ‘laboratory schools’ and ‘demonstration schools’. We summarise some of both the history and the diversity of language and use that as a basis for categorising six different strategies of educational change.

**Lighthouses, laboratory and demonstration schools**

The NIS model has begun by developing and testing policies and practices in a new school environment before looking for a means or a method of transfer. This makes the NIS more akin to an older tradition of educational innovation and experimentation, the laboratory school.

The conventional image of laboratory or model schools was that they would act as agents of change by demonstrating good practice. They would be ‘lighthouses’ illuminating other public schools, and ideas would diffuse across the system.
The idea of demonstration schools persisted from the 1850s onwards, and even recently found new expression in the US Charter Schools which grew quickly from the 1990s, and in the shortlived (1998–2005) Beacon Schools in the UK. While they all share the general idea that change can be promoted and spread by demonstration sites, the different types of model schools usually differ in the ways in which they approach innovation and reform. One approach is to focus on teaching practice, to demonstrate the art and craft of good teaching. These ‘demonstration schools’ were often connected with formal teacher education programmes. An early example is University High School at the University of Illinois. Founded in 1857 its mission was, and is still stated to be, to ‘promote effective high quality education throughout the teaching profession and to aid other educators in the process of improving the quality of education in their schools.’ It aims to continue the tradition of serving as a ‘clinical experience and practice site for pre-service teachers and experimental teaching activities’ (uhigh.ilstu.edu/aboutus.htm accessed July 2012).

The Parker School established at the University of Chicago in the 1900s was in the same tradition. Colonel Parker was interested in ‘what would help children learn . . . not why’ (DePencier 1967, 18) and saw part of the mission of the school to be a practice school for novice teachers. The demonstration schools persisted even as teacher preparation became more discipline based. The Falk School, ‘a progressive . . . school for demonstration purposes’ was established in 1930 at the University of Pittsburgh. And demonstration schools spread. They were operating in Australian public schools into the 1970s (Fletcher and Burnswoods 1980) and the North Sydney Demonstration School still operates today. The model or demonstration school concept has also been recast or re-labelled. For example model schools were created in the USSR in the 1930s to showcase the standard curriculum (Holmes 1999, 7). One recent version is the Professional Development Schools (PDS) in the USA, which were ‘envisioned as institutional settings that would be both models of the best P-12 practice and optimum sites for clinical preparation of novice teachers. In addition they would be schools where new knowledge and organizational structures would be generated, tested and refined. The practices that emerged . . . could then be disseminated to the larger educational community’ (Abdal-Haq 1998, 2). In the UK the most recent policy establishes the notion of ‘teaching schools’ and has two forms of arrangement. One borrows from the Scandinavian model of schools attached to universities to generate innovative and good practice informed by research. These are called ‘University Training Schools’ and would be run by universities.
The other, which has developed much faster, is the 'Teaching School'. These are 'on the model of teaching hospitals to lead the training and professional development of teachers and head teachers, and increase the number of National and Local Leaders of Education – head teachers of excellent schools who commit to working to support other schools' (DfE 2010, 9). They are also born of a desire to link the generation of knowledge by researchers or academics and the knowledge of practice in the schools. This mode of learning is to be found in the hospital and this is the analogy often invoked for all forms of demonstration schools: the teaching hospital, where best medical practice was displayed and new entrants to the profession trained systematically and under expert supervision. The weakness of the analogy is that the teaching hospital has a regime of individual diagnostic cases focused on individuals with specific conditions. The school usually deals with groups of students and more broadly defined ends. The strength and weakness of the demonstration school model is how, if at all, knowledge is shared, transferred to others and then applied. The first assumption is that display and, presumably, observation by novices will lead to learning or changed behaviour. This assumption is often elaborated to include recording, analysing and codifying the observed practice, with the resulting artefact distributed to the target audience. What happens when the observation takes place or the artefact reaches the school or classroom is unknown.

The same problem of lack of transferability and application was embedded in the concept of laboratory schools. The most famous is the laboratory school at the University of Chicago established in the 1890s. John Dewey's intention in founding the school was 'to attempt a systematic organization of the school curriculum, testing and developing methods both from the psychological and practical sides' (Durst 2010, 21). As adjunct to the university and its education department it would be a laboratory with 'two main purposes: (1) to exhibit, test, verify and criticise theoretical statements and principles; and (2) to add to the sum of facts in its special line' (Mayhew and Edwards 1936, 3). But Dewey had no plan for dissemination or diffusion and only a secondary interest in teacher preparation. His interest was essentially scientific 'to "demonstrate the feasibility" of the sorts of schooling he envisaged' (Cohen 1998, 442). Even after his departure while his successors, like Judd, encouraged faculty publication the 'key principle was "concerted analysis of the learning process under laboratory conditions"' (DePencier 1967, 72).

In summary the notion of an exemplary site of practice or experimentation as a means of spreading innovation falls short of the goal because there
is no explicit means of transferring practice and no motivation for teachers to take up new ideas or methods other than a desire to emulate or copy 'good' behaviour. The laboratory or demonstration school places greater value on experimentation and display than on the distribution of knowledge and the diffusion and adoption of effective practice. They lack a theory of action or a model of change.

Money, volunteers and mandates

The theory of change underlying the US federal government's educational interventions in the early 1970s worked on the assumption that 'seed money' would introduce and sustain change and if successful the changes would be taken up by others voluntarily. In reality additional money alone 'had little if any influence on the motivation' to innovate. Money alone does not shape commitment to change nor create motivations to reform or a 'concern for innovation' in school authorities. Other elements were important. Leadership and an institutional culture that welcomed innovation were 'necessary but not sufficient for effective implementation'. To be effective there also needed to be a well-structured implementation strategy with staff training and local material development (Berman and McLaughlin 1975, v-xi and 23).

The need for a range of measures to support innovation and programme adoption can be found in a recent study of two large scale interventions in US elementary schools. Both interventions, 'Success for All' and 'America's Choice' are well established school improvement networks serving hundreds of schools. These organisations were strongly affected by the operating environment: 'networks are prone to a high degree of uncertainty and unpredictability.' To survive this turbulence they need strong community infrastructure including curriculum and assessment materials, training, information systems and leadership development (Giazer and Peurach 2013).

The main method of diffusion or adoption in both interventions was for schools or schools districts to 'opt in', to volunteer to adopt the particular practice or programme. Diffusion of innovation by volunteerism or 'mimicry' is a well-established strategy. Examples include the long standing International Baccalaureate (IB) and the more recent Khan Academy, an online educational resource. These programmes offer a set of policies, materials, professional development and suggested practices to schools. These become criteria or standards for 'membership' of the community. Some
organisations, like the IB with its phases of candidature and stress on teacher development, have rigorous processes and requirements to join and to maintain membership. Others are more open, with fewer process requirements. But the distinctive feature is that schools elect to pursue a pre-designed path or model of improvement.

At the other end of the spectrum to volunteerism are centrally mandated, national or systemwide attempts to improve or change the ways schools work. Adoption relies on the authority or power of an agency to compel or enforce adoption. Policy statements, edicts or ukases specify what the school or teacher should do.

In some cases the policy or programme is designed by experts within ministries, or under contract to ministries, and rolled out uniformly. In recent times, this approach owes much to the public service nature of the school systems that operate within requirements of equality of treatment for individuals. It also avoids debates about the risks of ‘experimenting’ on groups of children that may harm them or give them an advantage over their age peers.

One example of a government mandated reform is the English National Literacy and Numeracy Strategy (NLNS). Initiated in 1997, NLNS set specific goals and communicated them widely. Implementation was backed by clear accountability, professional development and data mechanisms to monitor progress, distribute rewards and allocate support services. The initiative was ‘heavily directed from the centre’ and highly scripted, with little room for professional reflection and ‘local creativity’ (Fullan and Earl 2002, 4).

Some argue that assessment protocols can be ways governments transmit or promote teaching regimen or time allocations. Referring to the international programme of assessment (PISA) Meyer and Benavot, (2013, 17) argue that ‘centralization, standardization, uniformity, training (in the sense of “drilling”) technocratic elitism – have increasingly become part of the western institutional practice.’

There is variation within this centrally directed, ‘sit up and listen’, approach. In London the ‘City Challenge’ has the same drivers as most national and provincial government policies. ‘It was designed to improve educational outcomes for young people and “to crack the associated cycle of disadvantage and underachievement” in the Black Country, Greater Manchester and London’ (DfES 2007, 1). This initiative was occurring within a context of centralised mandated reform which many would argue was driven by an authoritarian transfer model of enforcement of policy through a rigorous national inspection model, known locally as Ofsted.
The City Challenge used a different set of strategies: school-to-school collaboration, a belief that the educational problems facing urban areas should be addressed at area level, for all schools in that area, with an emphasis on leadership and with support from external informed professionals either local or national (Hutchings et al. 2012).

There was also a very specific set of structures and procedures for knowledge transfer such as conferences, schools working together in small groups, a stronger school supporting a weaker one (which may also include soft federations); groups of three, led by the head teacher of a more successful school; and the setting up of knowledge centres or hubs in schools that had specific areas of outstanding practice that others could visit and learn from (Hutchings et al. 2012, viii, ix). The evaluation of the work (ibid.) concludes that the improvement of educational outcomes (attainment measured on inspection criteria, as well as the impact on disadvantage) was consistently above the national average for attainment and rates of progress. The factors that were seen as key included general points of planning such as having clear objectives at area and school level and having a clear focus on school leadership, especially through coaching, mentoring and other development opportunities. Other factors distinguished it from the centralised, mandated approaches, for example, avoiding target setting, offering additional support; working at an area level; offering bespoke solutions to tackle specific issues; an emphasis on observation of teachers by teachers, opportunities to reflect with colleagues, and coaching in the teacher’s own classroom (Hutchings et al. 2012, xi). The three-year time scale for improvement proved to be too short. Hutchings et al. (2012) concluded that ‘Perhaps the most effective aspect of City Challenge was that it recognised that people, and schools, tend to thrive when they feel trusted, supported and encouraged. The ethos of the programme, in which successes were celebrated and it was recognised that if teachers are to inspire pupils they themselves need to be motivated and inspired, was a key factor in its success’ (2012, xi).

These large-scale efforts at initiating change in public education in the USA and London all struggled with the concept of adoption and scale. They attempted to have large numbers of existing schools apply sets of policies and procedures, designed and codified by a central agency. Some offered incentives; others depended on authority or a means of compliance like inspection and some relied on external leadership and support.
Going to scale, franchises and fidelity

Elmore (1996) made ‘getting to scale’ a key variable in the design and implementation of educational reforms that were beyond the current competence of the main actors, be they teachers or administrators. His conclusion was that money and exhortation were not enough to change well established cultural institutions. The idea has been taken up by Coburn (2003) who argues that scale in educational reform is ‘under theorized’ and usually expressed solely in terms of numbers of schools. This overlooks the complexity of implementation and the extent to which a reform is adopted in practice, the ‘depth’ or quality of changed behaviour. Simply counting school sites also overlooks issues of sustainability and the extent to which norms, values and principles associated with the desired behaviours change. Coburn prefers to assess the pervasiveness of change; does it ‘spread’ throughout the institution and is it adopted or ‘owned’ and championed by people in the workplace? The importance of sustainability is underscored by Datnow’s (2002) qualitative research which showed that comprehensive reform efforts were often modified, adapted and abandoned as leadership and other contextual variables changed. She questions whether educational reform can realistically be ‘transplanted,’ adding further to the metaphors used to delineate the transfer of educational innovation.

Another approach is to conceive of the take-up of innovation in terms of ‘replication’. This evokes notions of franchising where outlets are created by following a specified set of norms and practices, where signage, product array, pricing and location are all regulated by a central body. Compliance is checked by inspection and penalties for deviance are specified in franchise agreements. An alternative view of replication comes from Winter and Szulanski (2001) who use empirical evidence to support the idea that an effective replication strategy includes a phase of ‘exploration’ where the programme or intervention is developed, tried and ‘refined’ before it is ‘stabilized and leveraged’ (730). Winter’s work has influenced Peurach (2012) in his comprehensive study of Success for All (SfA) which led him to conclude that rather than operating as a compliance franchise model SfA was largely a collaborative exercise that used knowledge of best practices to build effective professional relationships between teachers and the external agency (See also Glazer and Peurach 2013).

All four approaches informed Levin’s (2013) study of three well known US educational interventions: Teach for America; the Harlem Children’s Zone
and Knowledge is Power Program; the KIPP academies. Levin's primary interest was to 'develop a set of criteria for assessing (the) scalability of innovations especially those 'intended to have a national impact'. From an analysis of the generic literature on innovation and implementing change Levin argues that five factors are 'essential' when considering the scalability of an innovation: cost, capacity, infrastructure, political support and external environment. He applies these factors to the three innovations in order to assess the challenges each faces to reach 25% of the target population. While Levin's work is a valuable tool for analysing innovations, by his own admission the five factors do not capture the key questions of 'fidelity [and] efficacy' (2013, 10).

The tension between a franchise model with a strong emphasis on fidelity or compliance to ensure efficacy and the reality that organisations or teams need to learn and adapt processes to local circumstances is accentuated by going to scale. The increased number of sites or delivery points brings an increase in the diversity of those served and an increase in the number of environmental factors that can and will shape implementation. As scale increases so does the likelihood of variation.

The other source of variation is the professional practice of teachers. This is well-illustrated in a study for the Department of Education in the UK (Fielding et al., 2005) on the transfer of practice between schools, which concluded that four elements had special significance. Firstly and most importantly, 'that this kind of teacher learning is a social process that is sustained by relationships and trust; secondly, that it is a personal and inter-personal process that has to engage with our sense of who we are, with teacher and institutional identity; thirdly, that it requires conditions that provide support for learner engagement fostering the willingness to try something out; and, lastly, that the work of transfer has to be sustained over time. It is not a quick fix. It requires a more sophisticated and more patient understanding of time than is customarily acknowledged or allowed' (2005, 6). The team concluded that joint practice development better describes what happens when teachers collaborate to develop practice. It is not a notion of transfer or travel but rather a collaborative process in which one teacher develops their existing practice in the light of the collaboration. The teacher employs judgment about what to discard and what to adapt or adopt. This model sees the teacher who is learning as an active and engaged learner rather than a passive vessel.
Conclusion

The cross-national, national and school site models of reform reviewed briefly above lack a clear, articulated transfer strategy (with the possible exception of the NLNS). They assume that observation of practice or access to information about why a practice is effective will lead to changed behaviour and that this change will become ‘routinised’ – the sign of successful innovation (Berman and McLaughlin 1975, vii). Looking at these examples and other education reforms of the last forty years of ‘school reform’ in the industrialised democracies we see six basic strategies for knowledge transfer or take-up of reform. The first two characterise the demonstration sites. They are:

1. Observation of a desired practice will cause teachers to imitate or emulate that behaviour (transfer by mimicry)
2. Understanding why a practice is desirable or effective, or both, teachers will initiate and sustain changed behaviour because it will attain ‘some socially desirable end’ (epistemological transfer). (Bennis 1963, 134)

The third, fourth and fifth strategies have different approaches to motivation ranging from compulsion, to incentives to volunteerism. They are:

3. Change can be mandated or required (authoritarian transfer)
4. Fiscal incentives will stimulate and reward new behaviour (market transfer)
5. Change can be voluntary as school staff or individuals opt in (unguided transfer).

The sixth strategy is grounded in a model of collegiality and a community of professional practice:

6. Change can be constructed by school-to-school collaborations and local leadership supported by external informed professionals (collegial transfer).

The arguments put forward by David Hargreaves embody this, the sixth, model of change. Hargreaves’ (2012) thinking underpins the teaching schools model in the UK. He argues that there are three core elements to a self-improving school system:

- a partnership dimension
- a professional development dimension and
- a collaborative capital dimension.
Similarly, Moushedi et al. (2010) argue that collaborative practice is a key feature of the most improved school systems and that 'collaborative practice is the method by which a school system “hardwires” the values and beliefs implicit in its system into a form manifest in day-to-day teaching' (2010, 74).

Our argument is that for NIS and Kazakhstan this sixth strategy is the most apposite. It incorporates the elements that contributed to the effectiveness of other reform strategies more comprehensively than the other five approaches. It includes the external support and guidance that were important to the London City Challenge and SfA. It explicitly includes the school-to-school transfer and networking found to be important by Fielding et al. The emphasis on school-to-school transfer allows for ready observation of the practices of other teachers and departments which is a powerful process of learning in many reforms. It allows for the easy exchange of ideas, techniques and 'recognizable experiences' (Bruner 1966, 44). The collegial strategy also underscores the professionalism of many of the actors and encourages them to accept responsibility for improvement and for sharing knowledge.

The collegial strategy is also compatible with the proposition that knowledge transfer and the dissemination of reform or change in a social institution, like a school or system of schools, are best pursued through 'communities of practice'. These communities 'share cultural practices reflecting their mutual learning'. The members of these groups do things jointly and hold each other accountable. They share some norms of mutual respect and create and use a common 'repertoire of communal resources' (Wenger 2000, 239). These groupings of people within and across schools and involving actors from outside schools are effective ways of transferring, initiating and implementing change. This strategy is especially salient when a new system of schools is emerging, when the actors are coming together for the first time, bringing a variety of experiences drawn from different national and linguistic settings.

Communities of practice are not delimited by school boundaries, nor should they be. The experience of the London City Challenge and other reforms shows that networks that cross school boundaries can be very powerful ways of bringing people together to achieve practical results. This is reinforced by evidence on the benefits of teacher networks as change agents. Niesz (2007, 609), discussing voluntary teacher professional development networks, sees these as a focus on 'sound improvement informed by big ideas' about learning and change, flexibility and acting as a 'foil . . . to the myriad other factors' competing for teachers' time and attention.
Networks can also be a way for a central agency to support and guide development collegially. While many of the US examples of effective networks are voluntary networks it is important to note that many of them were external to schools, hosted by universities or non-profit agencies. Lieberman (1995, 74) concludes her review of them for the US National Science Foundation by arguing that in bringing teachers together 'whether in regard to particular subject areas, [or] articulated principles for reforming schools, new... techniques... provided them with access to new ideas and a supportive community.'

In short we argue that the collegial approach to the transfer of innovation, reform and practical knowledge is appropriate for NIS and Kazakhstan. It is an approach grounded in international experience. It also sits well with the realities of the nation where the challenges of distance and a relatively weak infrastructure are balanced by the presence of a well-educated, highly motivated teaching force. In practical terms for a post-Soviet nation with nascent institutions after twenty years of independence, it means placing a premium on the growth of voluntary professional associations, be they subject specific like Mathematics teachers, or thematic, such as trilingualism, or cross-curricular, like student leadership. These associations could operate at the regional and national level and act as self-sustaining networks for professional dialogue and the exchange of ideas and best practices. Support for these networks or communities of practice could be fiscal and technical or, in the form of infrastructure, they could be spaces and forums for meeting. It could extend to creating electronic bulletin boards, in Kazakh, Russian and English, to promote action research and discussion on educational issues, and the exchange of good practice. Whatever form this support takes, it should be based on the principles of collegial learning, emphasise the importance of learning from the observation and systematic discussion of practice and be supported by informed and trained professionals.
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