

Education research and evaluation in leading education nations

How nations organise, focus and fund
their research for policymaking

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January 2021

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Introduction

This is the second of two reviews aiming to understand how leading education nations around the world develop their education policies. The first considered how different governments make decisions and guide processes for developing and reforming their curricula. This second evidence review asks what role research and evaluation play in education policymaking of five different countries.

The key interest in this paper is how these countries organise, focus and fund their education research and evaluation, both in the context of major system change and in terms of how each country assesses the effectiveness of its education system. For each country, we have sketched the existing education research landscape and how it fits with policymaking. This has involved building a picture of the major institutions and their relationship to government; how they are funded, including an attempt to assess the magnitude of this funding in the context of other government spending; and how their research priorities are set.

The countries included in this study are Australia, Finland, Japan, Scotland and Singapore. The choice of countries included here was partly shaped by our work on the first evidence review, which was loosely led by PISA¹ rankings and a motivation to draw on diverse experiences from across the globe. There is not complete cross-over between the countries selected in each review, as the present paper was also led by an initial appraisal of the education research landscapes of different high-performing PISA countries (e.g. South Korea, New Zealand, Canada) with an attempt to identify the 'best' examples from abroad.

Method

We used desk-based research to complete this project, starting for each country with a broad internet search using keywords 'education research + *country*'. This work did not set out to be a systematic evidence review, nor is the work in sufficient depth to draw conclusions about which approaches are better than others. As with the first review, the sources we prioritised were the official documentation of each country's major research institutions, government documents, peer-reviewed journal articles and sources from the OECD.

¹ The Programme for International Student Assessment directed by the OECD.

Summary of findings

This summary gives a brief snapshot of findings for each country, focusing on (1) the key institutions and their relationship to government, (2) the magnitude of funding allocated to research and evaluation (where evidence is available), and (3) how the research agenda is set, particularly with regards to whether it is steered by government. The full country case studies that follow contain detail far beyond these three headings, including the specific focus of government research strategies.

Key institutions and their relationship to government

Australia contrasts with the other examples included in this review in that it has no national government-funded institution focused on education research. Instead, education research for policymaking is commissioned by different national- and state-level governments who act independently of one another. In previous years, research commissioned by national-level government has included the Longitudinal Surveys of Australian Youth (LSAY) and more recently several reports using LSAY data to explore drivers of student outcomes. There are numerous well-developed and longstanding professional associations of education researchers and educationalists, but these tend to have a more academic focus and have no formal link with policymaking. It appears that governments tend to commission education research on an *ad hoc* basis, tendering research contracts out to universities, consultancies and research institutions as required. The governments of Australia can and do engage the research capabilities of the Australian Council for Educational Research (ACER) through commissions and consultancies. While ACER has always been independently funded and is separate from government, it has a number of formal collaborations with the Australian government, such as the running of its GEM Centre² in partnership with the Department of Foreign Affairs and Trade.

The key institution for education policymaking research in **Finland** is the Finnish Education Evaluation Centre (FINEEC). FINEEC sits within the Finnish National Agency for Education (EDUFI) which is part of the Finnish Ministry of Education and Culture. The duties of FINEEC are governed by legislation and its operations are supervised by a government appointed Evaluation Council. FINEEC describes itself as independent, specifying this to mean “freedom of evaluation methods, organisation and results from the influence of, for example, the Ministry of Education and Culture or other parties.”³ Taken together it appears that FINEEC is part of the government function but its independence is retained to ensure methodological objectiveness. FINEEC carries out a range of research and evaluative work, but its core focus follows the Evaluation Plan which sets out a broad programme of work to assess the performance of the education system in Finland. This encompasses a sample-based approach to measuring attainment of pupils in Finland, as well as a range of other measures focused on *how* education is delivered and its cost.

Similar to the case of Finland, **Japan**'s leading education policymaking research institution, the National Institute for Educational Policy Research (NIER), was established by the Ministry of Education under an act of parliament. The reorganisation of the institution in 2001 was done in line with the restructure of other ministries, and since the mid 2000s it has worked in the same building

² Centre for Global Education Monitoring

³ Finnish Education Evaluation Centre, 'FINEEC', Karvi.fi, accessed 7 October 2020, <https://karvi.fi/en/fineec/>.

as the Ministry of Education, Culture, Sports, Science and Technology (MEXT), demonstrating how closely it works with the ministry. The mission of NIER is described as using research to “plan and design strategic educational policies in the mid and long term” and policies which “flexibly address social needs”. Activities include a number of projects and repeated surveys to understand the impact of curriculum reform in Japan, for example the ‘National Assessment of Academic Ability’ survey and the ‘Survey on the status of implementation of the Courses of Study’. The research programme also involves more future facing projects such as a current project to systematically explore the issues involved with making and implementing evidence-based policies.

Scotland does not have a national institution charged specifically with conducting educational research. However, Education Scotland is responsible for ensuring quality and improvement in Scotland’s schools and is jointly responsible with other government agencies for delivering the National Improvement Framework which is the main vehicle driving education policy research in Scotland right now. Scotland’s Research Strategy 2017 was itself developed by the UK Government Social Research function rather than by a Scottish education agency, and a combination of actors are involved in its delivery, including universities and research organisations in receipt of grants as part of the strategy. Similar to how Curriculum for Excellence was developed as a joint venture between a number of institutions in Scotland, so too education research in Scotland for policymaking is conducted across a range of platforms. The core aims of the Research Strategy are to develop research infrastructure; to develop a stronger evidence-base to inform how performance should be measured and ‘what works’ in school improvement; and finally to improve capacity within teaching and schools to make use of research.

In **Singapore** the key education policy research is channelled through research centres sitting within the government-funded National Institute of Education (NIE). The Office of Education Research (OER), which is part of NIE, administers the Education Research Funding Programme (ERFP). These institutions are closely affiliated with government. The core programme conducted by the Centre for Research in Pedagogy and Practice (CRPP), which is a subsidiary of NIE, has focused in detail over nearly two decades on qualitatively documenting classroom-level changes following curriculum reform, and attempting to link these quantitatively to outcomes.

Many of these institutions are also responsible for the administration of international surveys such as PISA and TIMSS⁴ in their respective countries.

Government funding allocated to research and evaluation

The funding of education research in **Australia** varies between states as each have their own independent research activities. The national government also conducts its own research activities, in recent years mainly through commissions and consultancies, and between 1985 and 2016 administered funding through the National Youth Affairs Research Scheme. This evidence review has not been able to find an indication of overall budget for either national- or state-level education research activity. While ACER is not government-affiliated or funded, it bears mentioning that the large research organisation had a revenue of just under AUS \$90 million in the reporting year 2018-19.

⁴ Trends in International Mathematics and Science Study

In **Finland**, FINEEC's 2016 annual report gives the net allowance of its operating costs as EUR 3,863,000. This equates to £3.3 million in 2019-20 prices.⁵ To put that in context, this represents about 0.015 per cent of Finland's overall education spending in 2016.⁶

NIER's budget from the government in **Japan** for the financial year 2019 is reported as JPY 3.1 billion. This is equivalent to £22.5 million in 2019-20 prices, of which £10.7 million (JPY 1.4 billion) is allocated to research and project costs. In context, this full figure of £22.5 million represents about 0.007 per cent of Japan's total annual spend on education.⁷ This makes for the largest absolute figure contained in this evidence review, and yet it represents the smallest proportion of total education spend for the three countries on which we could identify a full set of data.

This review was unable to identify details of total funding made available for education research in **Scotland** as part of the Research Strategy 2017. The Strategy document states that it is likely that funding would be made available through existing channels such as the Scottish Funding Council which mainly grants funds to universities. Unfortunately, no further information was unearthed in this research project.

The evidence review has identified the initial endowment made available to **Singapore's** Centre for Research in Pedagogy and Practice (CRPP) when it was first set up in 2002. The figures given here therefore do not represent an estimate for the full funding commitment to education research by Singapore's government. The CRPP received an initial funding commitment of SGD 48 million over five years. This is equivalent to £5 million per year in 2019-20 prices. To put this in context, this annual amount represents by our calculations 0.033 per cent of Singapore's total education spend for the year 2002. Whilst still a very small proportion, this is the largest percentage of the three countries for which we have identified full data. This is all the more significant if we consider that this is funding just for CRPP and not for the full research and operation costs of NIE.

⁵ To give education research funding in pound sterling, we used historical market exchange rates in the appropriate year (<https://www.ofx.com/en-gb/forex-news/historical-exchange-rates/>) and then adjusted to 2019-20 prices using Her Majesty's Treasury GDP deflators (<https://www.gov.uk/government/statistics/gdp-deflators-at-market-prices-and-money-gdp-september-2020-quarterly-national-accounts>).

⁶ To express the education research funding as a proportion of total education spend, we had to estimate the total education spend of each country in the given year. To do this we used historic World Bank data on education spending as percentage of GDP in each country (<https://www.macrotrends.net/countries/SGP/singapore/education-spending>), coupled with historic World Bank data on total GDP of each country each year (<https://data.worldbank.org/indicator/SE.XPD.TOTL.GD.ZS?locations=JP>). These figures were given in current US dollars, which we adjusted to the prices of the relevant years using GDP deflators sourced from Federal Reserve Bank of St Louis (<https://fred.stlouisfed.org/series/GDPDEF>). From here we then converted the sums to relevant currencies using historic market exchange rates (<https://www.ofx.com/en-gb/forex-news/historical-exchange-rates/>). This process allowed us to arrive at a final total estimated spend on education in each country in the relevant year, which we then used as the denominator to express education research funding as a proportion of total education spend.

⁷ See footnote 5 for explanation of method. Note that our estimate for Japan's total education spend is based on 2016 data, whereas the research funding figures are from 2019. See the note on estimating education research funding as a proportion of total education spend for further details.

How research agendas are set and to what extent they are steered by government

It appears that the research agenda directed by different governments vary greatly in **Australia**.⁸ Some states do not appear to have any planned research activity, whereas Queensland has a highly developed process for planning and using education research, including an Evidence Framework, Research Priorities developed in consultation within and outside of government, and a published Research Plan. The purpose of research in Australia is generally to inform the long-term policy decision-making at the respective levels of government, and in Queensland's case the research themes are designed to feed directly into the government's overall strategic priorities that go beyond education. ACER is independent of government and directs its own agenda, though they may be partly shaped by funds available through government commissions. Similarly, government funding opportunities may influence the research agenda of other education researchers in professional associations and universities across Australia.

The research and evaluation agenda of FINEEC in **Finland** follows a detailed specification that is agreed by the government-appointed Evaluation Council. The government-funded research agenda in Finland is therefore steered quite directly by government. The core work is intended to regularly assess the performance of the education system, not from an accountability standpoint but from an information-steering one with the aim of identifying ways to improve the system as a whole.

In **Japan**, there is evidence that the research agenda is shaped at least in part by government, in that some of NIER's most recent projects are taken from recommendations made in the most recent curriculum review agreed by cabinet members.⁹ Beyond this it would appear that the detail of NIER's research programme is developed within their Department of Research Planning and Development. However, given that the organisation works closely with MEXT (Japan's education ministry) and the organisation structure indicates that the Director General sits beneath a government body referred to as the Council,¹⁰ it is likely that the research agenda is shaped by government through these avenues. The purpose of research here is similar to that in Finland: regular assessment of overall system performance, alongside other ongoing projects to inform policy in mid and long term.

In terms of agenda-setting in **Scotland**, the Research Strategy 2017 was produced on behalf of the Scottish government and feeds directly into the government's National Improvement Framework, and so is entirely government-led. A key aim of the Research Strategy is to formulate how to measure performance in the future, and Scotland is in the early stages of implementing this. The plans for performance measurement encompass broader measures than solely attainment and look also at health and wellbeing outcomes. One point that bears mentioning is that the motivation for developing Scotland's capacities for data collection and research infrastructure through the Research Strategy comes from an OECD recommendation following a review of Scotland's education system.¹¹ This provides some insight into how Scotland's research agenda has been driven.

⁸ Judging from information on the Australian national government website, as well as a rapid sweep of state-government websites.

⁹ NIER, 'Message from the Director General : National Institute for Educational Policy Research', National Institute for Educational Policy Research, July 2019.

¹⁰ Note this is an assumption that the Council is a government body. Due to inconsistencies in translation of institution names this review was unable to find confirming evidence.

¹¹ OECD, 'Improving Schools in Scotland: An OECD Perspective' (OECD, 2015).

The research priorities for NIE and the granting of the ERF fund are developed jointly with **Singapore's** Ministry of Trade and Industry, specifically with the Ministry's Committee of the Future Economy. By virtue of this, the focus of the education research agenda is likely to bend more towards the growth and transformation of Singapore's economy than other examples in this review.

The remainder of this paper covers the five country-studies in individual detail.

Finland

The key institution feeding research and evaluation into education policymaking in Finland is the Finnish Education Evaluation Centre (FINEEC).

FINEEC was instituted in 2014, replacing three earlier organisations, but the Framework for Evaluating Educational Outcomes in Finland, by which it abides, dates back to 1999. The centre is an independent agency, operating within the Finnish Ministry of Education and Culture and as a separate unit within the Finnish National Agency for Education (EDUFI).

Its duties as set out in legislation are to “conduct evaluations related to education and teaching ... in accordance with an evaluation plan”.¹² This evaluation plan is renewed on a four-yearly planned cycle, set by the Evaluation Council with which the centre works in conjunction.

The Evaluation Council is “charged with supervising and developing the Centre’s activities” and “formulates a proposed evaluation plan, which is then submitted for approval to the Ministry of Education and Culture”.¹³ The membership of the council is appointed by government for a maximum of four years.¹⁴ Government decree details that the membership must “represent expertise in the activities of different educational sectors, teacher training, research, working life and students”.¹⁵

The areas of education covered by FINEEC and the Evaluation Plan that directs its work are early childhood education and care; pre-primary and basic education; general upper secondary education; vocational education; higher education; liberal adult education; and basic education in the arts.

The evaluation activity is entirely funded by government, and the net allowance for FINEEC’s operating costs as reported for 2016 were EUR 3,863,000.¹⁶ This equates to £3.3 million in 2019-20 prices. The financing section of the National Plan for Education Evaluations 2016-2019 states that the Ministry of Education and Culture had also pledged a roster of additional spending for various other evaluation projects, which had enabled FINEEC to extend the evaluation plan.¹⁷

This evaluation plan, agreed on a four-yearly cycle by the government-appointed Evaluation Council and implemented by FINEEC, has constituted Finland’s strategy for assessing the performance of its education system since the turn of the century.

Prior to this, Finland had been transitioning away from the much more centrally controlled system of the 1970s. This former system contrasts strongly with the system Finland is known for today, as it was characterised by mandatory curriculum content, active school inspection, control of state-approved textbooks and the use of standardised testing. 1985 marked the beginning of a move towards more local control, culminating eventually in the highly autonomous system of today. School inspection and control of textbooks were abolished in 1994. The framework for evaluating educational outcomes in Finland was published in 1999.

¹² ‘Act on the Finnish Education Evaluation Centre (Unofficial Translation)’, Pub. L. No. 1295/2013 (2013).

¹³ Act on the Finnish Education Evaluation Centre (unofficial translation).

¹⁴ Act on the Finnish Education Evaluation Centre (unofficial translation).

¹⁵ ‘Government Decree on the Finnish Education Centre’, Pub. L. No. 1317/2013 (2013).

¹⁶ Finnish Education Evaluation Centre, ‘National Plan for Education Evaluations 2016-2019’, 2016, 16.

¹⁷ Finnish Education Evaluation Centre, ‘National Plan for Education Evaluations 2016-2019’.

These moves towards greater freedom within the education system came with the acknowledgement of the greater need for evaluation data. The 1999 evaluation framework stated that “political and administrative decision-making requires more information about educational outcomes, because schools and local authorities now have more freedom to make decisions on their own teaching arrangements and emphases regarding content”.¹⁸ This framework quotes a report by the Parliamentary Committee on Education, which outlined its view on the purpose of evaluation:

“Evaluations are to support the continuous development of education to facilitate improved learning, as well as the realisation of the objectives set for schooling and learning by the various sections of legislation. The Parliamentary Committee wishes to underline that evaluation also has an important social and political function in enhancing the realisation of equality among people within the Finnish education system.”¹⁹

While this quote shows that part of the purpose of evaluation is to ensure the desired objectives are being met by the education system, the approach taken is not geared towards monitoring and maintaining standards *per se*. Vainikainen *et al.* (2017) offer a useful summary of the approach, explaining that:

“These evaluations are not conducted in order to categorise the schools into poor, better or good schools, or the pupils to less or more talented. Instead, they are elements of information steering. The aim is to provide information for the municipalities, schools and teachers on how to change and fine-tune the organisation of education and schooling and enhance more effective teaching.”²⁰

Moreover, the focus of the evaluations is far broader than academic achievement. As set out by the framework (1999), the education outcomes of evaluative interest are split into three domains, known as efficiency, effectiveness and economy. ‘Economy’ refers to the allocation of resources and ‘effectiveness’ to a very broad conception of academic achievement, on which we will expand below. ‘Efficiency’ is a broader category still, which can be described roughly as aiming to consider *how* education is delivered: it spans a number of objects of enquiry, from supply of/access to education, quality of instruction and drop-out rates, to staffing, regulations and agreements, and ability to respond to changes in society. All in all, the framework is very wide-sweeping and detailed, covering both quantitative and qualitative methodological approaches for most of the objects of enquiry.

While the approach is certainly broad, the evaluation is, for better or worse, not as penetrative as other approaches taken in other nations, in that it takes a sample-based approach to academic achievement (‘effectiveness’) as opposed to recording the attainment of the full population of a cohort. An additional distinction between Finland and many other countries is that sample-based national assessment is low-stakes for schools, teachers and pupils, as performance measurement is not used for accountability but for information steering, as quoted above.

¹⁸ National Board of Education, ed., *A Framework for Evaluating Educational Outcomes in Finland*, Evaluation 8 (Helsinki: National Board of Education, 1999), 7.

¹⁹ National Board of Education, 10.

²⁰ Mari-Paullina Vainikainen et al., ‘How Do Finns Know? Educational Monitoring without Inspection and Standard Setting’, in *Standard Setting in Education*, ed. Sigrid Blömeke and Jan-Eric Gustafsson, *Methodology of Educational Measurement and Assessment* (Cham: Springer International Publishing, 2017), 251.

The focus of the sample-based national assessments – e.g. which subjects are tested – are determined within the evaluation plan that is renewed on a four-yearly basis. Typically, between two and three subjects are tested and about 5,000 pupils are sampled. Within-school samples are taken and geographical representation is ensured. This collection can also serve local decision-making, though the municipality must pay in addition for all of their schools to be included within the study as opposed to a sample. Schools that are included within the sample are provided their results for free to contribute to their educational development.

Additional performance monitoring is conducted through thematic studies and measuring competencies around 'learning to learn' which have been commissioned from university research institutes.²¹

A key question that can be asked of this sample-based system is how it can be known if there are particular areas or schools that are severely underperforming. The simple answer is that these things cannot be known through a sample-based system, and indeed this is in keeping with Finland's decision not to take a hard-line approach to accountability. There are, however, formal and informal mechanisms that in theory compensate for the fact that the full cohort is not made visible or 'legible' to the state.²² It appears the approach in Finland relies on trust in the generally open and supportive culture of Finnish schools and on local level monitoring to ensure quality and that underperformance does not go unchecked.

Another related question is whether the system can ensure equity. Vainikainen *et al.* (2017) raise this question, citing evidence of grading differentiation between schools, specifically that pupils in high-performing schools tend to be graded more harshly and pupils in low-performing schools more leniently. In response to this evidence the curriculum reforms of 2014 sought to more precisely prescribe the standards for good performance.²³

This leads us to the question of how research and evaluation is used within system change and reform. As noted in the first evidence review of this series, which focused on how leading education nations evolve their curriculum systems, the most recent curriculum reforms in Finland (2014-2017) were led by EDUFI, the umbrella home of FINEEC, and made use of a variety of evidence-based on research and evaluation of previous years.²⁴ In addition to this was the Learning Barometer 2030 which was a large and complex qualitative project aiming to bring together a diversity of voices on what education will look like in 2030.²⁵

²¹ Vainikainen et al., 249–50.

²² Scott, James C. "Introduction." In *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*, 1-8. Yale University Press, 1998. Accessed October 16, 2020.

²³ Vainikainen et al., 'How Do Finns Know?', 249; Najat Ouakrim-Soivio, 'Toimivatko päättöarvioinnin kriteerit? : Oppilaiden saamat arvosanat ja Opetushallituksen oppimistulosten seuranta-arviointi koulujen välisten osaamiserojen mittareina', 8 November 2013.

²⁴ Irmeli Halinen, 'The New Educational Curriculum in Finland', in *Improving the Quality of Childhood in Europe*, ed. Michiel Matthes et al., vol. 7 (Alliance for Childhood European Network Foundation, 2018).

²⁵ Tiina Airaksinen, Irmeli Halinen, and Hannu Linturi, 'Futuribles of Learning 2030 - Delphi Supports the Reform of the Core Curricula in Finland', *European Journal of Futures Research* 5, no. 1 (December 2017): 2.

Singapore

The major research projects that take place in Singapore are funded indirectly by the Ministry of Education (MOE) and are carried out by research centres that sit within the National Institute of Education (NIE).

NIE is affiliated with Nanyang Technological University and is funded by MOE. Primarily a teacher education institution, it was founded as a teacher training college in 1950.²⁶ In the early 2000s however, NIE opened the Office of Education Research (OER) and the Centre for Research in Pedagogy and Practice (CRPP).²⁷ The timing of this development broadly aligned with major developments in education reform in Singapore, including the Thinking School, Learning Nation vision of 1997 and the Teach Less Learn More (TLLM) initiative of 2005.²⁸ Evidence suggests that the importance of research was woven into these initiatives, for example, part of the TLLM initiative was the Research Activist Attachment Scheme, in which, according to the National Library Board of Singapore, teachers could improve their skills in curriculum design and research to give their ideas more rigour and depth.²⁹

Since establishing these research centres, the NIE has solidified its research focus and capabilities. Research with policy impact is now a core part of NIE's work and is a key component of their strategic vision for 2022.³⁰ Part of the first pillar of this 2022 strategy is to develop an "overarching institutional research strategy" and to "strengthen the research-practice nexus", by "facilitating and encouraging research across NIE with visible current and future impact on programmes, pedagogies and policy". The strategy document states that this research is to be prioritised around their concept of "life-long learning".³¹

This research strategy is delivered primarily through the Office of Education Research (OER), which sits within NIE and is responsible for administering the Education Research Funding Programme (ERFP).³² This is a fund provided by the Ministry of Education (MOE) and is now in its fourth tranche spanning years 2018-2022. Grants are awarded to researchers within NIE, MOE and other academic and higher education institutions, who can apply for grants ranging in value between <S\$50K and >S\$350K.

The research priorities of the 2018-2022 tranche of this ERFP fund reflect the life-long learning approach of NIE's 2022 strategy. The OER website explains that these priorities were:

²⁶ 'Corporate Information | National Institute of Education (NIE), Singapore', accessed 14 October 2020, <https://www.nie.edu.sg/about-us/corporate-information/>.

²⁷ Allan Luke et al., 'Towards Research-Based Innovation and Reform: Singapore Schooling in Transition', *Asia Pacific Journal of Education* 25, no. 1 (1 May 2005): 5–28; 'Office of Education Research | National Institute of Education (NIE), Singapore', accessed 14 October 2020, <https://www.nie.edu.sg/research/research-offices/office-of-education-research>.

²⁸ National Library Board, Government of Singapore, 'Teach Less, Learn More | Infopedia', accessed 15 October 2020, https://eresources.nlb.gov.sg/infopedia/articles/SIP_2018-03-21_105159.html.

²⁹ National Library Board, Government of Singapore.

³⁰ '2022 NIE Strategic Vision: A Future-Ready National Institute of Education' (National Institute of Education, n.d.), accessed 14 October 2020.

³¹ '2022 NIE Strategic Vision: A Future-Ready National Institute of Education'.

³² 'Office of Education Research | National Institute of Education (NIE), Singapore'.

“developed in line with recommendations made by the Committee of the Future Economy and builds on the Thinking Schools, Learning Nation and Teach Less, Learn More policy initiatives. Through consultations with key education stakeholders in MOE, schools, and international and local experts, the 4th tranche ERF aims to strengthen NIE’s international standing as an education research institute of distinction and support Singapore’s education system in providing ‘Research-Informed Education for Future-ready Learners’.”³³

The Future Economy Committee is housed within Singapore’s Ministry of Trade and Industry.³⁴ This is the only example identified in this review where education research priorities have been developed in explicit connection with this part of government.

Sitting within the OER is the Centre for Research in Pedagogy and Practice (CRPP). When initially set up in 2002 the funding commitment for their research was S\$48 million over a five-year initial period.³⁵ This is equivalent to £5 million per year in 2019-20 prices. Luke *et al.* (2005) describe this funding level as “by local calculations, more than 10 times the per capita investment in educational research of the UK, Australia or Canada”.³⁶ Luke *et al.* also describe the original brief of the newly founded CRPP as:

“...the enhancement of classroom practice in Singapore schools in the curriculum areas of English, Chinese, Malay, Tamil, Mathematics and Science, and digital information technologies. A further goal of the Centre is to build overall national infrastructure and capacity in educational research, and to train a new generation of educational researchers, teacher educators, policymakers and curriculum developers from Singapore and Asia.”³⁷

The major research focus of the CRPP has been titled the Core Research Programme. This programme has run in three (or three and a half) waves to date, starting with the Core 1 which ran 2003 to 2007, followed by Core 2 between 2010 and 2014, a smaller scale pre-Core 3 study in 2014, and finally Core 3 which ran from February 2016 to January 2019.³⁸ This was an ambitious and large-scale programme involving multilevel analysis of schooling, pedagogy, youth and educational outcomes, with its key research question as “what factors contribute to educational success and outcomes in Singapore schools?” and with a task of understanding the impact of changes introduced by the new education policies.³⁹

The first wave of this research programme involved building a richly descriptive picture of what was going on in the system, through considering a variety of sources, from ten years of examination data

³³ ‘Office of Education Research | National Institute of Education (NIE), Singapore’.

³⁴ ‘The Future Economy Council’, accessed 15 October 2020, <https://www.mti.gov.sg/FutureEconomy/TheFutureEconomyCouncil>.

³⁵ Luke *et al.*, ‘Towards Research-Based Innovation and Reform’, 12.

³⁶ Luke *et al.*, 13.

³⁷ Luke *et al.*, 13.

³⁸ National Institute of Education, ‘CRPP Core Research Program’, accessed 14 October 2020, <https://www.nie.edu.sg/research/projects/project/crp-7-03-al>; National Institute of Education, ‘Core 2 Research Programme: Pedagogy and Assessment’, 2, accessed 14 October 2020, <https://www.nie.edu.sg/research/projects/project/oer-20-09-dh>; National Institute of Education, ‘Core 3 Research Programme: A Quantitative Study of Learning and Teaching in Singapore Classrooms’, 3, accessed 13 October 2020, <https://www.nie.edu.sg/research/projects/project/oer-29-15-ccy>.

³⁹ ‘CRPP Core Research Program | SingTeach | Education Research for Teachers’, May 2005, <https://singteach.nie.edu.sg/issue01-ideas01/>.

in Singapore schools; demographic data on all students in Singapore schools; web surveys of 20,000 students and teachers; classroom observations and audio recordings of 1,000 lessons; to copies of more than 1,000 student assignments.⁴⁰

The Core 2 wave then moved to focus mainly on classrooms, and on the changes in teachers' instructional, pedagogical and assessment practices brought about by the Teach Less, Learn More (TLLM) initiative of 2004/5.⁴¹ The NIE project outline explains the approach of the project:

“First, the Core 2 Programme will measure, map and model pedagogical practice in Singapore, including the definition of learning goals, the organization of classroom activity, the nature of the enacted curriculum and assessment practices, the use of instructional strategies, the character of the classroom learning environment, the intellectual quality of knowledge work in the classroom, and the structure of classroom interaction and discussion. Second, the Core 2 Programme will establish the degree to which classroom pedagogy has changed significantly since the introduction of the TLLM initiative in 2004/05 using the Core 1 data as baseline data. This will enable us to assess the effectiveness of school based implementation strategies in improving the quality of teaching and learning. Third, the Core 2 Programme will model the impact of pedagogical practice on motivational, cognitive, meta-cognitive and "non-cognitive" student outcomes.”⁴²

We have set this out in detail here to highlight the level of detail the research goes into with regards to classroom practice. Writing in the early days of the of the research, Luke *et al.* (2005) state that they know of few other policy-focused works that take this approach of understanding what goes on at the classroom level and attempting to map it to outcomes.⁴³ Core 3 builds on this work further including a second cohort and analysis of data on additional subjects.⁴⁴ All in all, education research for policymaking in Singapore has focused more on classroom level practices than other examples included in this review.

⁴⁰ 'CRPP Core Research Program | SingTeach | Education Research for Teachers'; National Institute of Education, 'CRPP Core Research Program'.

⁴¹ National Institute of Education, 'Core 2 Research Programme: Pedagogy and Assessment', 2.

⁴² National Institute of Education, 2.

⁴³ Luke et al., 'Towards Research-Based Innovation and Reform'.

⁴⁴ National Institute of Education, 'Core 3 Research Programme: A Quantitative Study of Learning and Teaching in Singapore Classrooms', 3.

Australia

There is no government funded national-level education research institution in Australia. Australia has established ways of generating education research at both national- and state-government level, as well as being home to the independently funded Australian Council for Educational Research (ACER) which is a longstanding global leader in education research.

At national level, activity conducted by the Department of Education, Skills and Employment to collect data and commission research to inform policy dates back 20-30 years.⁴⁵ The longstanding department-funded work includes the Longitudinal Surveys of Australian Youth (LSAY). This research programme began in 1995 and follows young Australians over a ten year period between the ages of 15 and 25. The main aim of the work is to “better understand key transitions and pathways in the lives of young people, particularly from compulsory schooling to further education, training and employment.”⁴⁶ The second longstanding research work funded by the department is the National Youth Affairs Research Scheme which ran between 1985 to 2016. The government website describes this scheme as a “cooperative funding program between the Australian Government and state and territory government” which funded “nationally based research into factors affecting young people, to help develop and implement policies and programs affecting young people.”⁴⁷ Publications funded through this scheme since 2003 vary in subject from engaging young people in remote areas, to body image, young carers, and financial debt. These projects are completed by a variety of consultancies and university research centres.

More recently the national department has commissioned and published five largescale reports using analysis of longitudinal data, including LSAY, international datasets including PISA and TIMSS, and longitudinal health data collected by an Australian health research institute. Three of these reports were produced by Deloitte Access Economics, starting in 2017, and these reports covered the economic impact of improving school quality, the drivers of student outcomes in Australian schools in terms of how this links firstly to practice and schooling quality and secondly to different student backgrounds.⁴⁸ The other two reports, published 2018, were conducted by the Murdoch Children’s Research Institute which is a charity-funded child health research institute.

It therefore appears that national-level education research tends to be commissioned through grants to consultancies, universities, or research institutes, previously through the National Youth Affairs Research Scheme and more recently on a more *ad hoc* basis.

Education research in Australia is also carried out at individual state level – with varying degrees of activity and state involvement. This review has not compiled a full picture of research activity across

⁴⁵ Skills and Employment Department of Education, ‘Research | Department of Education, Skills and Employment, Australian Government’, 30 June 2020, <https://www.education.gov.au/research-2>.

⁴⁶ Skills and Employment Department of Education, ‘Longitudinal Surveys of Australian Youth | Department of Education, Skills and Employment, Australian Government’, 16 June 2020, <https://www.education.gov.au/longitudinal-surveys-australian-youth>.

⁴⁷ Skills and Employment Department of Education, ‘National Youth Affairs Research Scheme | Department of Education, Skills and Employment, Australian Government’, 3 April 2020, <https://www.education.gov.au/national-youth-affairs-research-scheme-0>.

⁴⁸ Department of Education, ‘Research | Department of Education, Skills and Employment, Australian Government’.

each individual state but will instead give some illustrative examples. The extent of government involvement with educational research in, for example, Western Australia and Tasmania, appears to be mediating permissions for external researchers to conduct research in government schools.⁴⁹ Many states appear to have their own state-based professional association of educationalists, teachers and researchers which work as membership-based grant-giving organisations, though these are not linked in any way to state government.⁵⁰ Some of these are longstanding, like that of New South Wales, whose Institute for Educational Research was founded in 1928 and formed the blueprint for ACER, on which more below.⁵¹

In contrast with others, Queensland state government has a highly developed process for generating education research.⁵² This state, which is among the jurisdictions commonly referenced as highly performing educationally,⁵³ has a published research plan alongside priority research themes for its education policy research. According to the research plan, last updated in 2019, these priority research themes are “identified regularly through internal and external consultation and represent a forward research agenda for the Department.”⁵⁴ These priorities are designed to fit with the department’s overall strategy and is a key part of its evidence framework.⁵⁵ Similarly to the Australian national government approach, the education research conducted for Queensland is generally tendered out to universities and research organisations.

It is also evident that state governments commission the Australian Council for Educational Research (ACER) to fulfil some of their research needs, for example New South Wales’ Curriculum Review was featured as a project highlight in ACER’s annual report for 2018-19.⁵⁶

ACER was established in 1930 in Melbourne with a grant from the Carnegie Corporation.⁵⁷ It has since grown into a leading international research body with more than 400 staff working across multiple locations in Australia and Asia, as well as having a London office. It has a broad number of specialisations within education research, including data collection, assessment, psychometrics, and other methods of data analysis. ACER’s focus spans across all phases of education, from early years, primary and secondary education to vocational education and training and higher education. The

⁴⁹ ‘On-Site Research - Department of Education’, accessed 3 November 2020, <https://www.education.wa.edu.au/on-site-research>; ‘Research in Government Schools’, The Department of Education Tasmania, accessed 3 November 2020, <https://www.education.tas.gov.au/community-and-engagement/research-gov-schools/>.

⁵⁰ ‘About - About | WAIER’, accessed 3 November 2020, <https://www.waier.org.au/about?c=about>.

⁵¹ ‘NSW Institute For Education Research’, NSW Institute for Education Research, accessed 3 November 2020, <https://www.nswier.org/>.

⁵² The Department of Education (Queensland), ‘Our Plan and Priorities’, text, Education, 6 April 2018.

⁵³ Brian Creese, Alvaro Gonzalez, and Tina Isaacs, ‘Comparing International Curriculum Systems: The International Instructional Systems Study’, *The Curriculum Journal* 27, no. 1 (2 January 2016): 5–23; Martin Mills and Glenda McGregor, ‘Learning Not Borrowing from the Queensland Education System: Lessons on Curricular, Pedagogical and Assessment Reform’, *The Curriculum Journal* 27, no. 1 (2 January 2016): 113–33.

⁵⁴ Department of Education, ‘Research Plan: Creating a Culture of Rigorous Inquiry’ (Queensland Government), 8, accessed 16 October 2020, <https://education.qld.gov.au/about/Documents/final-research-plan.pdf>.

⁵⁵ Department of Education, ‘Priority Research Themes’ (Queensland Government, 2018); Department of Education, ‘Evidence Framework’ (Queensland Government, n.d.).

⁵⁶ ACER, ‘ACER Annual Report 2018-19’, n.d., 8, accessed 16 October 2020.

⁵⁷ ‘History’, Australian Council for Educational Research - ACER, accessed 19 October 2020, <https://www.acer.org/au/about-us/corporate-profile/history>.

organisation is entirely funded by contracted research, with a revenue of just under AUS \$90 million in the reporting year 2018-19.⁵⁸

ACER is entirely independent from government and conducts various consultancies for the Australian and other national governments. It also has formal ongoing collaborations with government, for example the Centre for Global Education Monitoring (GEM) is a collaboration between ACER and the Australian Government's Department of Foreign Affairs and Trade and works to develop and disseminate best practice in educational assessment.⁵⁹ Additionally there is a Centre for Education Policy and Practice that sits within ACER, described as investigating "what works to meet learners' needs and improve learning outcomes."⁶⁰

ACER's relationship with education policymaking in Australia again appears to be fairly *ad hoc*, with its involvement appearing to be through consultancies at both national and state level. Overall, the evidence suggests that the education research landscape in Australia is highly networked through different state- and national-level professional associations, including the Australian Association for Research in Education (AARE)⁶¹, and that policymakers can draw on a wealth of research expertise and capacity within universities and research institutions and ACER in particular. The level of engagement with research by policymakers, however, appears to vary from state to state.

⁵⁸ ACER, 'ACER Annual Report 2018-19', 24.

⁵⁹ ACER, 7.

⁶⁰ ACER, 7.

⁶¹ 'Home | Australian Association for Research in Education', AARE, accessed 3 November 2020, <https://www.aare.edu.au/>.

Scotland

Education Scotland is the government executive agency responsible for supporting the quality and improvement of education in Scotland.⁶² First instituted in 2011, Education Scotland was not involved in the development of Scotland's Curriculum for Excellence (CfE), but was described by the 2015 OECD review of Scotland's new curriculum as a linchpin in providing guidance, resources and quality assurance during its implementation.⁶³

Among a diverse range of functions – including ensuring the impact of CfE, inspection and review and teaching and leader development – Education Scotland is jointly responsible for implementing the National Improvement Framework (NIF) with a number of other organisations. The NIF was launched by the First Minister in January 2016 and sets out a vision for achieving “excellence and equity for all learners”. The NIF sets out four key priorities spanning across improved attainment; a narrowed attainment gap; improved health and wellbeing among young people; and improvement in employability skills and sustained positive destinations for all school leavers. To work towards these priorities the NIF also identifies six “key drivers of improvement” covering school leadership; teacher professionalism; parental engagement; assessment of children's progress; school improvement; and performance information.⁶⁴

Within Education Scotland's activities to implement this National Improvement Framework (NIF), an immediate use of research is the establishment of the National Improvement Hub. This is an online resource database hosting an extensive library of research, exemplars and other resources. These are a mix of works that have been commissioned by Education Scotland and those openly available from other education research centres across Europe and beyond. Ultimately this hub is more aimed at informing practice than policymaking.⁶⁵

In conjunction with and in support of the NIF, the Scottish Government has also developed and published, with the UK Government Social Research function of the civil service, a Research Strategy for Scottish Education in 2017.⁶⁶ The 2017 document describes the purpose of the Research Strategy as “to help deliver [the four priorities of the NIF] by developing the research infrastructure, a knowledge base of ‘what works’ and the capacity of the system to use evidence”.⁶⁷ The report also makes clear that the approach directly follows recommendations made by the 2015 OECD review of the implementation of CfE. These recommendations are published in full under the report's detailed proposals (pp.6-7) and span a range of points arguing for a more rigorous and evidence-based approach and to generally strengthen evaluation and research including independent knowledge

⁶² ‘Framework Document’ (Education Scotland, 2012).

⁶³ ‘Framework Document’; OECD, ‘Improving Schools in Scotland: An OECD Perspective’.

⁶⁴ Education Scotland, ‘Implementing the National Improvement Framework | What We Do | Education Scotland’, accessed 9 October 2020, <https://education.gov.scot/education-scotland/what-we-do/implementing-the-national-improvement-framework/>.

⁶⁵ Education Scotland, ‘National Improvement Hub | National Improvement Hub’, accessed 9 October 2020, <https://education.gov.scot/improvement/>.

⁶⁶ ‘A Research Strategy for Scottish Education’ (Scottish Government, 2017).

⁶⁷ ‘A Research Strategy for Scottish Education’, 2.

creation. The strategy introduction summarises these recommendations, perhaps in a limited sense, as arguing for a more coherent approach to using data across the school system.⁶⁸

The first strand of the strategy – which is to develop research infrastructure – concerns mainly the funding of independent research, with a particular interest in research on inequalities that take a multidimensional approach and on improving capacity to make use of existing datasets. The strategy notes that funding may be made available through existing mechanisms, such as the Scottish Funding Council.⁶⁹ This review was unable to find any follow up reporting giving more detail of what funding has been made available.

The second strand of the strategy – described as a focus on “system performance and ‘what works’” – involves detailed consideration of how best to evidence the performance of the education system. The document states that:

“...there are key research questions to establish how a full picture of system performance is gathered. This involves looking across and considering all four of the capacities stated in CfE⁷⁰, as we are encouraged to by the OECD, and also maintaining a long-term perspective which ensures that ‘performance’ is never reduced only to technical fulfilment of chosen indicators.”⁷¹

The strategy proposes an extensive list of research activities to develop Scotland’s evidence-base for the performance of the system. This covers the continuation of ongoing work including the participation in PISA international assessments and supporting work of NIF to develop appropriate indicators for public accountability, including a new health and wellbeing data collection to “measure the ‘other three’ capacities of CfE”. The work also covers the collection of teacher professional judgement data; evaluation of the Scottish Attainment Challenge; continuous waves of Behaviour in Scottish Schools Research; continuing review of evidence surrounding Additional Support Needs; and a fresh OECD Education Policy review of the Scottish system (which has now begun in 2020).⁷² Future additional areas to improve the evidence-base for performance include (but are not limited to) the long-term development of a bespoke index of social background to better understand disadvantage among young people in Scotland and the development of a longitudinal approach to student achievement by linking pupil-level data, social characteristics, teacher judgement data and data on long term outcomes in the labour market.⁷³ Under this heading also comes research on the organisation of teacher capacity and on workforce planning.

Within this same second strand, the strategy discusses at equal length an ambition to draw together a better coordinated body of knowledge surrounding ‘what works’, particularly regarding promoting equity in education. A key action for achieving this is through establishing a partnership with the Education Endowment Foundation as a provider of summaries of international evidence. This section of the report also identifies some key areas for creating new research based in Scotland, including

⁶⁸ ‘A Research Strategy for Scottish Education’, 2.

⁶⁹ ‘A Research Strategy for Scottish Education’, 8.

⁷⁰ The four capacities form the key purpose statement of Scotland’s Curriculum for Excellence. The statement is that all young people should develop the four capacities to become successful learners; confident individuals; responsible citizens; and effective contributors.

⁷¹ ‘A Research Strategy for Scottish Education’, 9.

⁷² ‘A Research Strategy for Scottish Education’, 11.

⁷³ ‘A Research Strategy for Scottish Education’, 12.

closing the attainment gap, ensuring the performance of highly able children is not neglected, understanding the impact of school interventions taking into account complex interactions of different pupil characteristics, and the evaluation of policymaking.

The third and final strand of the strategy discusses the importance of enabling educators to use and act on lessons drawn from data and research.

In terms of the cost of delivering this strategy, the document states that resourcing would be agreed once the relevant advisory bodies had met. At this point this review has not been able to identify any follow-up documents to the one referred to here. However, reports on the National Improvement Framework give insight into the research work that has been or is in the course of being carried out.⁷⁴ This includes the beginnings of a Learning Together National Network designed to improve the connection between policy, research and practice, as well as the publication of a number of research projects. The Health and Wellbeing Census has now been developed and was first carried out in academic year 2019/20.⁷⁵

Our work on the development of CfE in the previous review covered a number of important critiques around the use of evidence in this process. Among these critiques was the general lack of insightful administrative data for assessing the performance of the system, including the non-existence of the prerequisite information to evaluate the impact of CfE,⁷⁶ and also the ineffective engagement of the CfE development process with existing literature on curriculum development.⁷⁷ The critiques referring to lack of administrative and evaluation data were levelled at CfE by OECD, and indeed these OECD reports seem to have formed the backbone of Scotland's use of research and evidence in developing its new curriculum.⁷⁸ The Research Strategy aims to respond directly to these OECD critiques and Education Scotland and the National Improvement Framework are drivers for improving the research infrastructure in Scotland.

⁷⁴ 'Achieving Excellence and Equity: 2020 National Improvement Framework and Improvement Plan' (Scottish Government, December 2019); '2018 National Improvement Framework and Improvement Plan for Scottish Education: Achieving Excellence and Equity' (Scottish Government, 2017).

⁷⁵ Scottish Government, 'Health and Wellbeing Census: Information on the Upcoming Health and Wellbeing Census Taking Place during the 2019-20 Academic Year.', February 2020, <https://www.gov.scot/publications/health-and-wellbeing-census-2/>.

⁷⁶ OECD, 'Improving Schools in Scotland: An OECD Perspective'.

⁷⁷ Mark Priestley and Walter Humes, 'The Development of Scotland's Curriculum for Excellence: Amnesia and Déjà Vu', *Oxford Review of Education* 36, no. 3 (1 June 2010): 345–61.

⁷⁸ Richard Teese and Organisation for Economic Co-operation and Development, eds., *Quality and Equity of Schooling in Scotland*, Reviews of National Policies for Education (Paris: OECD, 2007); OECD, 'Improving Schools in Scotland: An OECD Perspective'.

Japan

The role of educational research in policymaking in Japan has grown through reforms in the last few decades.⁷⁹ However, the institutions at the forefront of educational research in Japan have existed for the best part of a century.

Several important associations were set up in the 1940s, first the Japan Educational Research Association (JERA) in 1941, the National Federation of Educational Policy Research Institutes (NFERI) in 1948, and then National Institute for Educational Policy Research (NIER, formerly National Institute for Educational Research) in 1949. JERA is now the largest academic association in education in Japan and was established alongside a number of other institutes all with the aim of contributing to Japan's sciences and focuses in particular on the advance and spread of academic educational research.⁸⁰ NFERI is a network of prefectural, municipal and private research institutions working to ensure closer liaison between these institutions nationally.⁸¹ NIER was established by the Ministry of Education to "conduct practical and basic research and studies related to education" and, given its restructure in 2001 to focus on research to inform education policy, will be the main focus of this section.⁸²

The NIER website describes the organisation as a national research body for comprehensive educational policy, responsible for collecting and analysing academic research data, in order to plan and design educational policies. It is the only education policy organisation in Japan. The website states in addition that "NIER represents Japan in international society, and provides necessary advice, support and information for domestic institutes and bodies related to education."⁸³ In this way NIER's work feeds into national policymaking and international collaboration and supports schools and Japanese school boards to deliver current education policy including curriculum reform.

In a description of the organisation's mission, the NIER website states that the findings from its research "should be used to plan and design strategic educational policies in the mid and long term". In addition to this long timeframe, it also states that the work of the organisation should consider "solutions to urgent political issues" and that "the outcomes should be used to plan and design educational policies which flexibly address social needs".⁸⁴

⁷⁹ Taro Numano, Yoshiyuki Nagata, and Mariko Ichimi Abumiya, 'Educational Research for Policy and Practice in Japan – With Particular Reference to Youth Education', *Educational Research for Policy and Practice* 1, no. 1 (2002): 35–50.

⁸⁰ JERA, 'Greetings from the President', Japanese Educational Research Association, May 2019, <http://www.jera.jp/en/>.

⁸¹ Numano, Nagata, and Abumiya, 'Educational Research for Policy and Practice in Japan – With Particular Reference to Youth Education', 48–49.

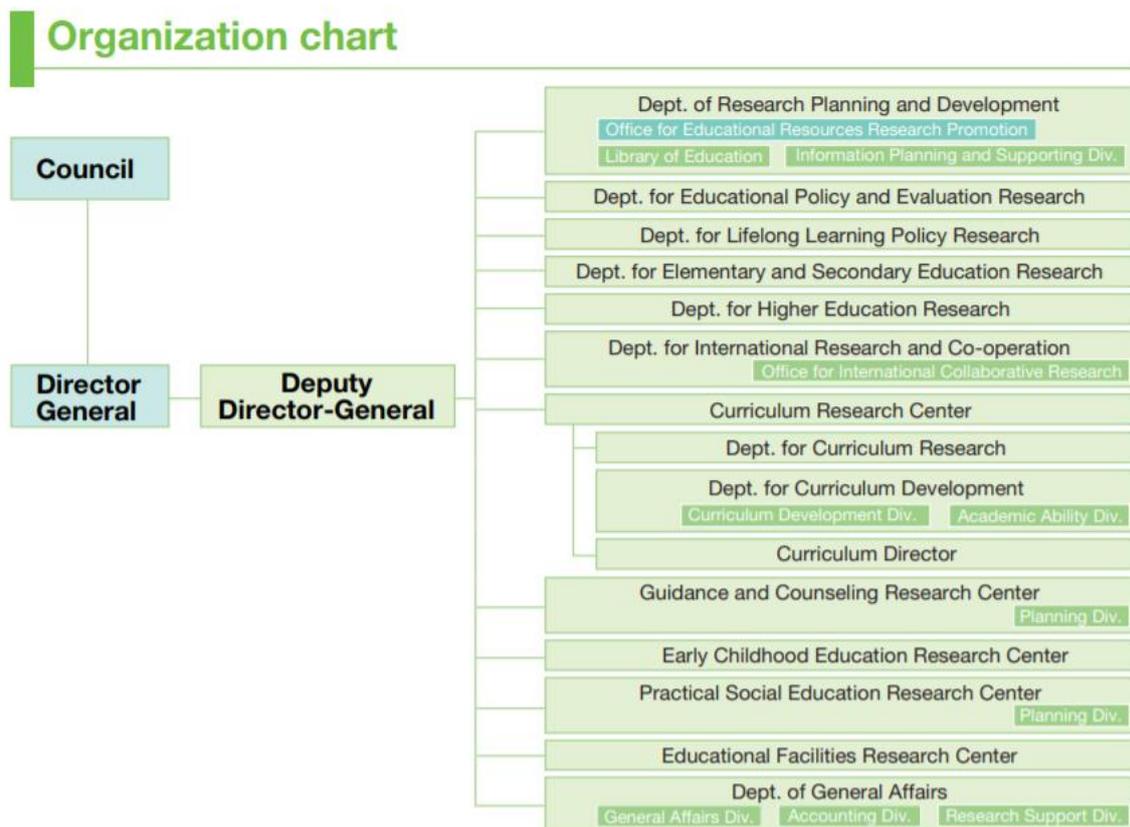
⁸² NIER, 'Message from the Director General : National Institute for Educational Policy Research'; M Brindhamani and K Marisamy, eds., *Comparative Education* (Laxmi Book Publication, 2016), 124.

⁸³ NIER, 'Position, Mission and Features of NIER Research Activities: National Institute for Educational Policy Research', National Institute for Educational Policy Research, accessed 12 October 2020, https://www.nier.go.jp/English/aboutus/menu_4.html.

⁸⁴ NIER.

This national research body was restructured in 2001 to focus its work more directly on education policymaking and to ensure its work would have a more direct link with policymaking in the future.⁸⁵ This change came in the context of general concern around education nationally, in response to pressing issues of bullying, violence, school refusal and corporal punishment, which resulted in MEXT⁸⁶ setting out a large scale reform plan for the 21st century, known as the Rainbow Plan owing to its seven priorities.⁸⁷ It appears there was an acknowledgment of the need for research and evaluation as part of this reform plan to understand progress and successes in the future.

NIER's work overview for 2019 provides a breakdown of their organisational structure.



Source: NIER, 'National Institute for Educational Policy Research 2019', October 2019, 3.

It is notable for this review that NIER's organisational structure has a department dedicated to research planning and development. It is this department that focuses and coordinates the direction of research projects, as well as being responsible for dissemination of research. Under this department sits the Office for Educational Resources Research Promotion, which not only publishes

⁸⁵ Numano, Nagata, and Abumiya, 'Educational Research for Policy and Practice in Japan – With Particular Reference to Youth Education', 49.

⁸⁶ Ministry of Education, Culture, Sports, Science and Technology in Japan.

⁸⁷ Numano, Nagata, and Abumiya, 'Educational Research for Policy and Practice in Japan – With Particular Reference to Youth Education'.

research findings and data via its database and website, but also manages the Library of Education, which is a physical library containing more than half a million volumes of educational literature.⁸⁸

In addition, there is the Department for Educational Policy and Evaluation Research. NIER's work overview report for 2019 describes this department as responsible for carrying out:

“empirical and comparative research on issues that form the basis for planning, implementing, and evaluating Japan's national educational policies. The Department's recent work includes basic studies and research concerning the system, current state and/or future vision of educational administration and finance, and exploring the ideal ways to establish school systems able to respond to rapid social changes.”⁸⁹

Another notable feature of NIER's organisational structure is the Curriculum Research Center, under which sit the Departments for Curriculum Research and for Curriculum Development. It also appears significant that an individual Curriculum Director is specified on the organisational chart, in contrast for example with the other departments. However, this desk-based research was not able to identify any English-language resources that give further detail on this role.

The Curriculum Research Center takes an outward facing role in its approach to curriculum research. It works in collaboration with research institutions, universities and other organisations to conduct surveys and research on the fundamentals of national policy in elementary and secondary school curriculum. Detail on specific projects will follow below. Another facet of its outwards facing role is working with schools and other educational institutions to support them in their delivery of the curriculum. This is done through the development and provision of teaching materials, exemplars and case studies, aiding both curriculum design and teaching methods.⁹⁰

The same report also gives detail of NIER's total budget for the financial year 2019, which was JPY 3,139 million, with 137 staff members.⁹¹ This equates to £22.5 million in 2019-20 prices, of which £10.7 million (JPY 1,492 million) is allocated to research and project costs.

NIER works closely with the Ministry of Education, Culture, Sports, Science and Technology (MEXT), them both being located within the same government building as each other.⁹² Recent research projects reflect this close relationship and the focus on education policymaking and curriculum reform. Some of NIER's recent projects are drawn from recommendations of the recently renewed 'Basic Plan for the Promotion of Education' which was approved by the Japanese government in June 2018, notably including a research project on the making of objective evidence-based education policy.⁹³ This project aims to systematically explore the issues that come with making and implementing evidence-based policies, notably focusing on the examples of England and the US, and is scheduled to complete in 2021.⁹⁴

Under the Curriculum Research Center, NIER carries out a number of research projects related to the overall changes to curriculum introduced over previous decades. For example a current project is to

⁸⁸ NIER, 'National Institute for Educational Policy Research 2019', October 2019, 4.

⁸⁹ NIER, 4.

⁹⁰ NIER, 5.

⁹¹ NIER, 3.

⁹² NIER, 'Message from the Director General : National Institute for Educational Policy Research'.

⁹³ NIER.

⁹⁴ NIER, 'National Institute for Educational Policy Research 2019', 7.

conduct empirical research on school-based curriculum-development in preparation for revisions to national curriculum guidelines.⁹⁵ A prime example of the surveys carried out is the National Assessment of Academic Ability survey (NAAA) which is conducted in cooperation with the Japanese education ministry (MEXT). This is an annual survey reintroduced in 2007, having been out of use without any form of national assessment since the 1960s.⁹⁶ It was reinstated partly due to worries around falling academic standards, particularly internationally according to PISA, and indeed the format of the test is similar to that used in the PISA surveys. The survey has multiple stated purposes, ranging from ensuring educational equality, to assessing the national level of achievement, to building a longitudinal picture of educational improvement, to improving individual teaching and learning.⁹⁷ The survey is not officially used for accountability. However, geographical breakdowns are published and taken very seriously by the various prefectures they apply to.⁹⁸ The administration of the survey has fluctuated from applying to a full cohort population to being sample based, due to differing demands of expert panels⁹⁹ and government administrations.¹⁰⁰

Other examples of work related to curriculum reform include the ‘Survey on the status of implementation of the Courses of Study’ and the ‘Research Designated Schools Project’, which are described as aiming to track the status of the curriculum implemented in schools in comparison with the national curriculum and to improve curriculum guidance.¹⁰¹ These Designated Schools were established by MEXT for research purposes, alongside Pilot Schools, which Numano *et al.* describe as having “the objective of developing curriculum and methodologies that are responsive to rapid social change.”¹⁰² Additionally, the Center also works on research and development for evaluation standards and methods.¹⁰³

Finally, it should be noted that, beyond the policy-focused work of NIER, educational policy in Japan can also be influenced by research carried out by teachers in schools. Numano *et al.*’s description of the research landscape in Japan circa the beginning of the 21st century explains that Japan has a strong tradition of teacher-initiated research and that this research can have a significant influence on educational policy.¹⁰⁴

⁹⁵ NIER, 8.

⁹⁶ Hiroshi Sato, ‘National Assessment of Academic Ability in Japan: A Comparison with Australia’, *Bulletin of Institute of Education University of Tsukuba* 41, no. 1 (2016): 16; Naoki Kuramoto and Rie Koizumi, ‘Current Issues in Large-Scale Educational Assessment in Japan: Focus on National Assessment of Academic Ability and University Entrance Examinations’, *Assessment in Education: Principles, Policy & Practice* 25, no. 4 (4 July 2018): 415–33.

⁹⁷ NIER, ‘National Institute for Educational Policy Research 2019’; Sato, ‘National Assessment of Academic Ability in Japan: A Comparison with Australia’; Kuramoto and Koizumi, ‘Current Issues in Large-Scale Educational Assessment in Japan’.

⁹⁸ Kuramoto and Koizumi, ‘Current Issues in Large-Scale Educational Assessment in Japan’, 422.

⁹⁹ Kuramoto and Koizumi, 421.

¹⁰⁰ Sato, ‘National Assessment of Academic Ability in Japan: A Comparison with Australia’, 4.

¹⁰¹ NIER, ‘Position, Mission and Features of NIER Research Activities: National Institute for Educational Policy Research’.

¹⁰² Numano, Nagata, and Abumiya, ‘Educational Research for Policy and Practice in Japan – With Particular Reference to Youth Education’, 49.

¹⁰³ NIER, ‘National Institute for Educational Policy Research 2019’, 5.

¹⁰⁴ Numano, Nagata, and Abumiya, ‘Educational Research for Policy and Practice in Japan – With Particular Reference to Youth Education’, 48.