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Using educational research and innovation to address inequality and achievement gaps in education

An OECD-Institute for Education Sciences Seminar Summary Report

11-12 December 2017
Washington D.C., United States of America

This paper summarises the discussions of the international seminar on "Using educational research and innovation to address inequality and achievement gaps in education" jointly organised by the OECD Centre for Educational Research and Innovation (CERI) and the U.S. Institute for Education Sciences (IES).

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JT03429548

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Executive Summary

The focus of the two-day workshop was to discuss how research and innovation can help address inequality in education around the world. A diverse set of education stakeholders convened to discuss the current state of research, identify areas for further inquiry, and examine the role of researchers in developing effective policy responses to inequality.

The workshop began with presentations that provided context to inequalities between OECD and partner countries, as well as disparities in outcomes among U.S. cities and districts. These framing presentations noted that poverty does not necessarily determine outcomes, that significant variation in outcomes lies within schools, and that outliers and variation in data can indicate where certain schools, communities, districts or countries are addressing inequality in unique ways. Subsequent plenary and breakout sessions provided a deep dive into various issue areas and how inequality can be addressed using certain interventions or with certain subpopulations. Through opportunities for questions following plenaries, during breakout sessions, and during the policy panel, participants engaged in dialogue and reflection on the role of research in developing effective policy and discussed areas for future collaboration. Participants identified the various roles of research in policymaking, including the use of evidence to continue to inform and reframe research questions, the use of research to inform long-term strategy, the importance of collaboration among various stakeholders, effective translation of research to target audiences, and how research can be used for conceptual and instrumental purposes.

The group identified three issue areas of focus for future descriptive and exploratory studies: 1) understanding the "black box" of education or what happens in the schools and classrooms; 2) early childhood outcomes based on poverty; and 3) the connection between communities and schools. There was particular interest in learning from places that succeed in improving student outcomes and reducing achievement gaps between more- and less-advantaged students. In regard to considerations for future interventions and evaluations, the group discussed methodology and process, better use of data and evidence that already exists, and how to translate research to policymakers. To conclude, the organizers provided feedback on how the findings and discussions could be taken forward in their organisations and highlighted areas of hope as participants return home to reduce inequality in their own contexts.

Introduction

On 11-12 December 2017, the Organisation for Economic Cooperation and Development (OECD) Centre for Educational Research and Innovation (CERI) and the Institute for Education Sciences (IES) in the United States Department of Education hosted an international workshop to discuss how to use research and innovation to fight inequality in education around the world. The William T. Grant Foundation and the Education Endowment Foundation provided support for the convening, with event organization by the American Youth Policy Forum. The workshop convened a diverse set of education stakeholders, including policymakers, advisors, researchers, and funders, representing 16 countries, to address three key goals:

1. Share innovative approaches to tackling inequality in educational opportunities and outcomes.
2. Spotlight the role researchers can play in developing effective policy responses to educational inequity.
3. Identify areas where new research is needed and lays the groundwork for future international collaboration.

To reference the presentations described in this brief, including graphs and tables, or see research cited within each plenary or breakout session, please see event resource page.

Framing Remarks: Defining and Measuring Inequality across the OECD

The workshop began with presentations from **Andreas Schleicher**, Director for Education and Skills at the OECD, and **Sean Reardon**, Professor of Poverty and Inequality of Education at the Stanford Graduate School of Education, United States. They provided a context of inequality, including comparisons between countries, U.S. cities, and socioeconomic status of student experience and opportunity, achievement and growth, resource allocation, postsecondary enrolment, and mobility.

Schleicher began by articulating how the OECD uses research to address inequities in education. The Centre for Educational Research and Innovation (CERI) at the OECD provides and promotes international comparative research, explores innovative approaches to education and learning, and facilitates bridges between research, innovation, and policy development. The Programme for International Student Assessment (PISA), an international assessment and survey completed by over half a million 15-year olds students in over 80 countries, provides a rich dataset for comparative research. PISA assesses students on math, science, reading, problem solving, and financial literacy, measuring students' abilities to use and apply their knowledge. Students also provide additional information such as their personal background and information on their schools, and parents, teachers, and other stakeholders provide information regarding school policies and practices, resources, and other institutional characteristics.

Next, Schleicher discussed how to define and measure equity and equality on a global scale. He described equality as treating everyone the same and equity as aligning resources with need. In understanding equity and equality, he explained it is useful to consider both inputs and outcomes. In regard to inputs, equality concerns the evenness in distribution of financial and human resources, while equity can be thought about as the

allocation of resources based on need and social background. In regards to outcomes, equality can be conceptualized in terms of student and school performance, while equity takes into account social background and student outcomes. Essentially, equity is not when all students have the same outcomes, but rather when outcomes are not dependent on social background.

To explore the relationship between equity and performance, Schleicher presented the mean PISA science performance scores for participating countries, across a horizontal axis of equity. This illustrated that countries with varying degrees of equity demonstrated high science performance. This finding is important, given that many people believe that there is a trade-off between quality of education and equity, that in order to achieve equity across social background the quality of the education will be compromised. Given this variance, Schleicher explained that "poverty is not destiny," which can often lead people to consider how or if culture impacts the variation in equity and performance. Schleicher pointed out that some countries have made progress over the past few decades in closing achievement gaps, including the United States. While some discredit international comparisons because of the diversity of conditions among different countries, countries—or populations within certain countries—can be compared with one another, and differences in outcomes among "like" countries can indicate how certain educational interventions may result in positive change.

Schleicher asked the participants to posit where variation in student achievement is manifested. Variations in science performance between and within schools in OECD countries revealed that more variation occurred within schools than between schools. This highlights the need for continued inquiry into the processes within schools that can cause this variation among student performance.

The relationships among various characteristics such as resource allocation, governance, school choice, and instructional practice and a variety of outcomes were examined through comparing OECD and partner countries. Schleicher discussed resource allocation, demonstrating through graphs on teacher-student ratio and class size that there is no relationship between resources and how those resources are allocated. While the U.S. and China have similar student-teacher ratios, they differ in class sizes. This highlights how organizational structures and roles and responsibilities of teachers differ across countries. Schleicher also examined how resources are spent and how much resource distribution is aligned with need. He explained that for most countries investment in education is regressive, and the students who are the neediest are not receiving the highest quality or quantity of resources. Schleicher also highlighted that it is often more difficult to assign teaching resources equitably than material resources.

In regard to governance, Schleicher explained there is no relationship between the percentage of private schools in a country and the performance of the system. He added, however, that the regulatory environment for public and private schools, especially with regard to financing and resource allocation, has an effect on differentiation between private and public schools. Specifically, he suggested that greater regulatory oversight of private schools may be associated with greater opportunity for disadvantaged students and with reductions in achievement gaps between upper- and lower-income students of various social backgrounds. When social background affects the type of instruction students receive, inequality is reinforced.

In considering inequities in practice and access to certain forms of instruction, Schleicher said that parents make decisions on which schools to send their children to, based on

characteristics such as school expenses and reputation. These decisions are affected by whether a school is disadvantaged or not, resulting in variation in performance. The type of instruction that students receive differs across countries and is often dependent on advantage. Students from disadvantaged background tend to be taught through memorization practices, which becomes less useful as problems become more difficult, while more advantaged students are taught through elaboration strategies, which are more useful with more complex problems. Schleicher also shared that teachers set expectations differently for students of various social backgrounds. When social background affects the type of instruction students receive, inequality is reinforced.

To close, Schleicher emphasized the need to be cognizant of how differentiated teaching practices can influence student outcomes. Additionally, he highlighted that while OECD countries spend a lot of money and resources on education, very few of those resources are used to build evidence for what works in reducing inequality within education. Schleicher compared the education sector to the health sector, noting that the latter spends more resources on building evidence.

Reardon's presentation supplemented Schleicher's international findings, with an examination of inequality in the context of the United States. Reardon shared that while racial achievement gaps between white students and black students and white students and Hispanic students have been declining over the past 70 years, the 90/10 income achievement gap has widened.[1] Schleicher had asserted that "poverty is not destiny," that low socio-economic status (SES) did not ensure poor performance, Reardon similarly highlighted the heterogeneity in how students of low SES perform across U.S. districts and how that heterogeneity can indicate areas where researchers must examine what strategies lead to differing outcomes among students of similar circumstances.

Reardon presented key findings from two studies that use big data to better understand inequality in the U.S. The Chetty, Hendren, Kline and Saez (2014) study used tax records to track parent income rank, the primary college children attended, and the child's income rank. The study's primary analyses are based on 12 million children born in the United States between 1980-82 and their income rank in 2014. The Chetty et al. findings demonstrated that college attendance rates were clearly correlated with parental income rank. Students with parents of a higher income rank attended college at ages 18-21 at higher percentages. Additionally, the Chetty et al. findings show that students with parents of higher income ranks attend the most prestigious U.S. universities (Ivy Plus Colleges) at higher percentages than those with parents of lower income ranks. A comparison of mobility among students who attend Columbia University and State University of New York (SUNY) Stony Brook demonstrated how both universities allow for significant student income mobility, yet accessibility to each school differs, as SUNY Stony Brook student population's parents distribute across all five income quintiles fairly equitably, while over 60% of Columbia's students' parents are in the 5th top income quintile.

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[1] The 90/10 income achievement gap refers to the gap in achievement among students whose families are in the 90th percentile of family income distribution and students with families whose income distribution is in the 10th percentile of family income distribution in the United States. To learn more, refer to https://cepa.stanford.edu/sites/default/files/reardon%20whither%20opportunity%20-%20chapter%205.pdf.

The second example examined was from findings of Chetty, Friedman, Saez, Turner, and Yagan (2017) using standardized test score data, school demographic composition, and school and community characteristics disaggregated by district, year, grade, subject, and subgroup. The data demonstrated trends between academic achievement, socioeconomic status, and growth in achievement among various grade levels. Among U.S. school districts between 2009-2015, average academic achievement among 3rd graders increased as students became more affluent. Reardon then displayed the learning outcomes and socio-economic composition of the 100 largest U.S. school districts and how academic achievement of students in Chicago made visible progress to move above the national average when examined from grades 3 to 8. The academic achievement growth rate in Chicago was the highest among the 100 largest districts, despite its lower socioeconomic status. Reardon also presented the relationship between achievement and growth, demonstrating that high early achievement does not necessarily indicate high growth, and many low early opportunity districts have high growth in academic achievement. While many researchers, practitioners, and policymakers focus on early childhood as an intervention and strategy to promote academic achievement among students, Reardon asked participants to consider how students in districts like Chicago are having significant growth in later years.

Reardon ended his comments by noting that trends and outliers in the large administrative dataset he has used allow researchers to create hypotheses and identify case studies for further research. Randomized control trials and quasi-experimental studies are useful in creating a backbone for policy evaluation and can then be used to facilitate more precise social policy that is designed for specific contexts or social institutions.

Reardon advocated for more data. While his presentation focused on the few big administrative data sets that are available, he explained that national-representative samples often test small percentages of the student population, for example the National Assessment of Education Progress (NAEP) tests students every 2 years but only includes 1% of the student population. Given that students in the United States are tested a lot, Reardon stated that population-level administrative data can provide a description of high-resolution geographic and temporal patterns.

At the conclusion of the presentations, participants queried a few key points. If variation in achievement often occurs within schools, what are possible contributing factors? The group considered how teaching practices and training and implicit tracking of students could be factors, and the presenters shared how targeting within-school variation with policy can be difficult. Participants also questioned what strategies or factors contributed to Chicago's high growth rate, an outlier among other large districts. Participants also discussed whether the United States can compare data across states when student assessments differ state to state. To further explore the impact teachers and resource allocation can have on student achievement; participants questioned how systems can allocate teachers to produce better outcomes, especially for students from low-performing schools and districts. Schleicher explained that while some countries use financial incentives, career incentives have been shown to attract teachers. He also mentioned that equitable distribution of teaching resources is an efficient means to equity. Schleicher also highlighted that the duties and roles of teachers and organization of the workplace differ greatly around the world, as in some countries teachers have responsibilities of a social worker or psychologist in additional to instructional duties, and sometimes with those additional duties comes additional support, time, and resources.

Highlights

- "Poverty is not destiny"
- Devote resources to building more evidence of practices that work
- Make better use of evidence we already have and use it to understand where we need to do more digging and have more targeted policy conversations, for example:
  - What conditions contribute to within-school variation?
  - "Like" districts can have different outcomes – why?

Goal 1: Innovative Approaches to Tackling Inequality in Educational Opportunities and Outcomes

The plenary and breakout sessions throughout the convening sought to explore systemic-, community-, school-, and classroom-level responses and approaches to reducing inequality. Two of the sessions focused specifically on addressing educational inequality of two disadvantaged student subpopulations– students with disabilities and immigrant/mobile students.

School Choice

The plenary session on using school choice to address inequity included presentations from **Rebecca Allen**, Professor and Director of the Centre for Education Improvement Sciences at the University College London (UCL) Institute of Education, United Kingdom, and **Gregory Elacqua**, Principal Education Economist at the Inter-American Development Bank.

The session began with an overview of how school choice manifests itself in England. Allen explained that "choice" has existed in England for as long as schools have existed, but she questioned whether educational outcomes are better as a result of it. In England, there are areas with low social mobility, where it is difficult to get a good education or find a job. These are not metropolitan areas and thus are not as conducive to school choice, since there are fewer students and fewer educational options. These areas are termed "opportunity areas" by the government. The key populations of focus in England are the gypsy Roma population, black Caribbean students, and students who receive free school meals, due to their low rates of both achievement and growth.

Survey data related to parental choice indicates that parents use school inspection information, performance data, personal views from friends and family, value proximity, academic performance in school, and social composition when making decisions about which schools their children should attend. That being said, the survey also indicated that 4 out of 10 parents do not consider academic results or reputation when making decisions. There are known inequalities about which students can and will travel farther to attend school. Ethnic minorities, students who are not free school meal eligible, and higher ability children are subpopulations that will travel farther to attend school.

Allen also described the likelihood of students' acceptance to their first choice school through the school choice process. The likelihood of being accepted into your first choice school is dependent on various characteristics, such as location, the school density within that given area, and the school's performance. School admissions can allocate priority based on several characteristics such as special education needs, siblings, school catchment zones, proximity, religious criteria, and academic selection.

Allen also discussed the intersection between school admissions and segregation. She explained that school admissions policies perpetuate segregation, given the way school choice is structured. You have a higher chance of getting accepted to your first choice school if you are a high achiever and also if you are of a certain religion, as many schools are religiously focused. Additionally, Allen highlighted that forced attendance at local schools and integrated housing policy would most likely reduce school segregation.

Next, Allen provided some ways in which England is tackling these inequalities. The country has strengthened its admissions code, eliminating the use of certain mechanisms by schools to screen certain students, is experimenting with priority for students on free meals for selective schools, and is providing better information to parents. Allen also emphasized that quantitative research shows that sometimes choice improves opportunities for students, and other times it does not. While there is an idea that choice exists for all students in England, school choice is only fully actionable for students who fit within certain characteristics, such as belonging to certain religious institutions.

To conclude, Allen shared four key lessons from England. First, school choice is more useful in urban areas where high quality alternatives are accessible. Second, under certain assumptions, choice can increase school segregation. Third, policymakers should not assume that parents will make great choices without behaviour interventions, and finally, policymakers must be aware of the political and administrative costs of providing "choices" that cannot be realized.

Elacqua's presentation focused on Chile's history of school choice since the 1980s. Chile is a particularly interesting case study given that the government has made data available for research since 1997. After the transition to a military government in 1981, public education was decentralized from the state to over 300 municipalities. Universal vouchers were given to public and private schools, yet school screening was allowable, and there was no accountability. In 1994, school fees were introduced, and the government provided low socio-economic schools with more funds. Over 20 years the use of private vouchers expanded. In 1999 there were still huge gaps in access to preschool and expectations of attending college among public, private voucher, and non-voucher sectors. Low-income students were primarily concentrated in public schools, and large achievement gaps existed between high and low socioeconomic status (SES) students.

After a return to democracy, the Chilean government improved the school choice and voucher program, and three main policies were introduced in the 2000s: school voucher adjustments based on location, student voucher adjustments based on SES, and increased testing and accountability. These changes narrowed the funding gap among schools. Enrolment changes continued with more families choosing private schools. Gaps in preschool access and expectations to pursue higher education narrowed between sectors, as well as achievement gaps between low and high SES students. Yet, segregation persisted among sectors, with low SES and the most disadvantaged students concentrated in public schools.

In 2011 there were important student protests in reaction to increased segregation, growth in for-profit voucher schools, and discriminatory school selective practices. The Inclusion Law of 2015 aimed to strengthen parental choice and reduce segregation by eliminating selection, school fees, and not allowing for-profit schools to participate in the voucher program.

Elacqua shared some lessons learned from the evolution of school choice in Chile. He noted that vouchers that adjust for students and school characteristics can have positive impacts on equity. He also discussed the ongoing debate about school fees and if they act as a barrier to choice or if they prompt parents to be more engaged and hold the school accountable. Elacqua also discussed funding challenges, explaining that for small urban schools, the voucher does not cover operating costs, and for public schools that have certain restrictions on their budget, firing, and closing policies, adaptations to changing enrolment and funding take longer. Chile has also made significant strides over the last few decades to increase the information publicly available and made the process more transparent, through publishing test scores, centralizing the school enrolment system, and creating accountability and incentives for schools to focus on learning rather than selection. After two years of the Inclusion Law, low SES parents are participating in choice at similar rates to other parents.

Following the presentations, the group raised a few issues. The group discussed the use of data in policymaking, with Allen sharing that data has informed the policy debate about admissions policies related to academic selection, but not religious selection. In Chile, data has been publicly available for 20 years and is used by the academic community for research. The group also questioned the effects of school choice on integration efforts. In London, choice aided school turnaround and lessened inequities in outcomes, yet certain schools then became more attractive to and served more higher-SES-students. In Chile, while changes to choice policy have had positive impacts on outcomes, there still remains significant segregation between sectors.

Comprehensive School and Neighborhood Services

Diane Schanzenbach, Professor at the School of Education and Social Policy at Northwestern University, United States, provided background on poverty in the United States. and a few examples of comprehensive schools and neighbourhood services. She said that approximately 17% of people in the United States live in poverty, and poverty is often concentrated, exasperating its effects on communities. Eligibility for free and reduced price lunch is often used as a proxy for poverty, and schools serving over 40% of students on free and reduced price lunch are considered "high poverty" schools. In many states, large numbers of students are attending these schools.

One approach to providing comprehensive services that has garnered a lot of attention in the United States is the Harlem Children's Zone (HCZ). Schanzenbach described five aspects of the HCZ model: 1) saturate an area with services that reaches a critical mass of people and students, 2) provide a continuum of services, 3) focus on building community, 4) evaluate programs and strive for continuous improvement, and 5) foster a culture of accountability. Another similar model is the Promise Neighbourhoods, which focuses primarily on developing early childhood programs, providing holistic academic enrichment, targeting programs for high school students, and providing family and community supports. The first five "Promise Zones" were located in San Antonio, Texas; Los Angeles, California; Philadelphia, Pennsylvania; Southeastern Kentucky; and the

Choctaw Nation of Oklahoma. Schanzenbach explained that both of these models are expensive, that they involve blending of funding from many sources, and while evaluations find positive effects, most research focuses on the impact of schools. Further inquiry is needed on the impact other community institutions and programs are having on outcomes.

The discussion focused on issues of where comprehensive and neighbourhood service programs are targeted, which institutions support them, how they are funded, how to make these services sustainable, and how best to get this information into the hands of policymakers. One participant shared that discussion of these types of services must be incorporated into conversations about addressing rural educational inequities. A funder explained that he does not often receive applications for interdisciplinary research that focuses across service systems. A researcher responded with the need to encourage interdisciplinary training and problem-oriented research and requested support for these projects. While charter schools had been highlighted as often providing more comprehensive services, another participant challenged the group to consider how traditional public schools are also making strides in providing more holistic services to their students. Another participant added that community colleges are an essential piece to comprehensive community solutions, often functioning as a hub that connects high schools, higher education, and the labour market, especially in rural areas. In discussing community and neighbourhood services, the group also discussed how research needs to get into the hands of municipalities and school boards. Lastly, the group questioned the difference between comprehensive policy and comprehensive interventions, or if they were one and the same.

Early Childhood Programs

Caroline Ebanks, Team Lead for Early Childhood Research at IES, United States, provided some context about early childhood programs (ECHP) in the United States Ebanks shared that children in the United States have limited access to targeted programs, as the United States does not have universal care, but children do benefit from these targeted programs, which primarily focus on serving low-income children. Additionally, the ECHP can help address the school readiness gap among children entering school, by providing programs for academic, social, and emotional skill development. Participation in ECHP can help reduce the readiness gap but not eliminate it, and participation can lead to better high school graduation rates, fewer special education interventions, and less grade retention. Ebanks closed by explaining that more high-quality programs are necessary to meet the needs of low-income children. Various characteristics affect the programs' quality, such as the student-to-teacher ratio, how teachers interact with the children, and the kind of instruction provided.

Paul Leseman, Professor in the Department of Education and Pedagogy at Utrecht University, the Netherlands, provided some context to ECHP in Europe. Targeted programs have been found to be most cost-effective, but they can increase segregation and stigmatization. Additionally, these targeted programs tend to focus more on academic skills than social and emotional learning, which may be creating a new skills gap for children. Universal ECHP reaches more children, but is more expensive and can compromise the quality of programming, especially for low-income students. Additionally, these universal systems can be exclusionary and discriminatory. France and Belgium offer universal care starting at a young age, yet struggle with inequality. Also, even in some universal systems, there is still room for inequity because wealthier parents

can offer more to their children. Parents with more wealth can pay for additional services, maintaining certain achievement-of-skills gaps.

The group discussed how to create more high-quality programs, especially to support low-income children. While some emphasized the need for more research on emotional development and social and emotional learning and its relationship with ECHP, one participant questioned whether the research shared and mentioned during the session was relevant, given that transition from ECHP to elementary school is essential to ensuring the effects of these programs stay with students. He explained that effects of ECHP decline two or three years after a child leaves the program, and aligning ECHP with school reform efforts is crucial to maintain and continue student growth. He shared that the group should consider questions such as how programs can be co-located with schools or how school personnel can work to continue learning that occurs in ECHP. Another participant shared that OECD has a new study investigating these transition points, by studying 5-year olds and emerging literacy and math skills, among many other characteristics such as class, gender, and ECHP experience.

Participants queried the need for these programs. A few in the group mentioned the lack of rigor in ECHP research and questioned whether the early childhood field is assuming that these programs are more beneficial than children staying with their families. Others shared that these programs are critical for many families and that ECHP can impact women's ability to enter the workforce.

Education Technology

John Pane, Distinguished Chair in Education Innovation and Senior Scientist at RAND Education, United States, and **Christophe Gomes**, Deputy Director at Agir pour l'école, France, shared their expertise on the role of educational technologies in reducing inequity. Pane explained that rigorous evaluations of education technologies have found limited impacts. RAND is currently researching computer adaptive learning and the role of technology in personalized and individualized learning, a type of learning that has potential to reengage students, target their interests, and offer greater support to those that need it. As personalized learning is gaining more traction at the federal, state, and local levels, RAND was asked to investigate the effects of personalized learning, as there is not much evidence in the field. RAND's quasi-experimental study shows that students starting out below the national norms closed the gap over two years of personalized learning in math and reading, and most students in personalized learning surpassed their peers. Teachers in personalized learning schools reported more individual time with students, higher levels of competency-based learning, and more use of data, time, space, and staff to personalize learning. Yet, personalized learning did not work well in all schools. The study highlighted common challenges, including the time needed to develop lessons, poor integration of data systems, and tensions between grade-level standards and competency-based learning. Pane explained that while personalized learning appears to be promising in improving student achievement, time is needed to fully understand effects, which can be inhibited by contextual factors and by the level of implementation of these practices.

Gomes shared his work related to how technology can be used to amplify and supplement teacher impact. In considering how long it takes students to become readers, his organization focused on how that time could be used more effectively. The organization has developed a free app to increase the time that students spend learning phonics and

reading. The app has been targeted to students in K-1 schools in some of the poorest neighbourhoods in France.

To close the presentation, both presenters highlighted common criticisms of technology use for participants to consider. These included how technology can potentially replace certain teacher responsibilities, increase screen time and isolation, lead to less collaboration, debate, and exchange of ideas, compromise student privacy, and increase inequity by allowing for students to achieve at a slower pace.

Participants questioned how the app incorporated various cultures and content, how teachers were trained, and what infrastructure was required. Gomes explained that the app used different voices and accents, and the product came with simple tools to train teachers how to use it. He also explained that the app does not require wifi service and so allows for easy access for schools. Participants also acknowledged the lack of research addressing common criticisms of technology, the need to consider how to address trends in technology, and to what degree teachers are involved in development of technological tools.

Behavioural Strategies

Presenters **Emily Doolittle**, Team Lead for Social Behavioural Research at IES, and **Jacquelyn Buckley**, Team Lead for Students with or at Risk for Disabilities at IES, United States, directed participants to read through a framing document and consider how they conceptualize the idea of "behaviour." Buckley explained that behavioural skills are important for students to do well academically, and research indicates that students who exhibit problem behaviours often have poor academic performance. That being said, teaching behaviour skills and social and emotional learning are not always prioritized or integrated into learning processes. Additionally, school disciplinary disparities exist, as students of color and students with disabilities are disproportionally suspended and expelled at higher rates than their white peers and non-disabled peers.

Participants discussed the challenges of the classroom. The group acknowledged that teachers need to know how to teach students from a variety of backgrounds and also discussed the tension between classroom management and developing social and emotional skills and competencies within the classroom. Additionally, the group highlighted that the focus cannot be solely on students when discussing discipline, but also how teachers and other school staff address certain situations. Participants emphasized that teachers can have implicit bias, dictating how they treat different students, often without knowing it.

While the initial discussion had been primarily focused on schools in the United States, participants from other OECD countries said that their countries were also dealing with disciplinary issues and biases, especially within districts serving primarily low-income and immigrant students. One participant shared that her country struggled to recruit and keep good teachers in districts in poverty, and another explained the difficulty in training their teaching workforce on how to address issues of race and racial bias. Doolittle mentioned that in the United States, the racial composition of the teaching workforce is not representative of student demographics, a dynamic essential to consider in teacher bias. Buckley highlighted the need to focus on making social and emotional learning culturally relevant to students. The group offered various suggestions for incentivizing good teachers to stay in disadvantaged schools and districts, such as providing clear career pathways or financial incentives. Another dynamic to consider is the aging

elementary school teacher workforce in the United States, and participants suggested that efforts be focused on teacher preparation programs that will likely be training a large cohort of upcoming teachers.

Lastly, the group discussed the presence of security and police officers in schools and the effect they can have on student learning. Buckley highlighted how restorative justice practices are being used as a model to deal with disciplinary issues.

Professional Learning

During this breakout session, **Lynne Vernon-Feagans**, Senior Research Scientist at the University of North Carolina Chapel Hill, United States, facilitated discussion about how teacher professional learning can reduce inequality. In the United States, teacher training occurs primarily within two models: teacher pre-service training, in which students receive instruction in formal classes, with shadowing and student teaching experiences; and in-service training, such as workshops at schools and coaching teachers in classrooms. Feagans explained that research has shown teachers learn by doing, that mentoring in real life settings is important, and that while knowledge of content is important, it alone cannot reduce achievement gaps among students. Research also indicates that teacher management and organization and positive relationships with students is particularly important for at-risk students.

Following this brief presentation, participants shared what teaching and professional learning experiences have been most meaningful for them. One participant mentioned the use of teacher home visits as a way to bridge school and home life and allow another medium for communication and feedback between parents and teachers. The group also discussed the balance of responsibilities of a teacher and the importance of communities of practice that provide material (time, resources, space), human (leadership, expertise), and social resources (opportunities for collaboration, teaching among other professionals). One participant mentioned the Labs for Collaborative Research, a lab which schools and universities can be a part of and engage in the bridging of research and practice. Teachers in training serve as brokers in different schools in the community and use experiences in practice to inform research questions. A participant from Finland described their robust teacher training programs. All universities there have teacher-training programs that are research - and evidence-based, following a national core curriculum. Sweden has a significant number of refugees and migrants that were previously teachers but cannot teach since they do not have a Swedish certification. To meet the workforce demand for more teachers, the country has created a program called Fast Track, in which people can get a teaching certificate in two years rather than five.

In considering how to structure training programs, a participant expressed the importance of recruiting teachers of colour and also those from within the community where the school is located. Additionally, the group discussed the importance of culturally competent teachers and a diverse experience during the training period.

Income Support Strategies

During this plenary session, **Greg Duncan**, Distinguished Professor in the School of Education at the University of California Irvine, United States, **Davide Azzolini,** Researcher at the Research Institute for the Evaluation of Public Policies, Italy, and **Arthur Heim**, Project Manager at France Stratégie, France, offered perspectives from various countries on income support strategies and their role in promoting equity.

Duncan shared that growth in family income inequality does account for most of the growth in education inequality, as income is more predictive of increasing gaps than family structure, maternal educational attainment, and other factors.

Duncan then presented on existing literature and research. To investigate causal evidence, researchers can look to random assignment experiments that provide financial rewards to families. The literature suggests that causal impacts are more selective than correlation findings suggest, that achievement of students is most sensitive to the income of the family during middle childhood, and that attainment is most sensitive to family income during adolescence. Duncan also shared that very little is known about the income effects on early childhood other than correlational evidence of gaps in brain structure and function, and the selective causal impacts highlight the need for more randomized control trials.

Duncan then shared three mechanisms through which income and child outcomes, such as attainment, socio-emotional behaviour, and health, can be linked: 1) what money can buy, 2) family processes, and 3) foetal and child stress and immune function. He said that income allows parents to buy cognitive stimulation for their children, to provide quality childcare, and live in neighbourhoods and districts that provide high quality education. Duncan cited his research indicating that between the 1970s and 2000s, as income inequality was growing, the difference in annual spending per child for families in the bottom and top quintile drastically increased. Duncan also provided evidence for income affecting family processes, such as maternal mental health, parenting, and parental cognitive "bandwidth"— the ability to consider long-term consequences when making decisions.

Duncan presented three strategies for reducing income and attainment gaps: 1) direct cash transfers, such as child allowances, 2) in-kind cash transfers, such as the U.S. food stamp program, and 3) conditional cash transfers. The remainder of the presentation focused on conditional cash strategies. This strategy was tested in two U.S. cities: Bronx, New York and Memphis, Tennessee. In this study, approximately 1,200 families in each city participated, half of which were serving as controls. The families received cash rewards for outcomes like student attendance, certain grades and test scores for adolescents, medical and dental visits, and sustained work and educational credentials for adults. The results indicated that USD 2,000 a year cash payments did reduce poverty, increased happiness, and increased medical and dental visits. The provision of the payment also resulted in reduced employment and earnings among families and had no effect on school performance or the health of children. Duncan described another example of the conditional cash strategy termed the New Hope demonstration, a random assignment experiment in Milwaukee, Wisconsin. New Hope required proof of more than 30 hours of work a week, in return for provision of a set of supports, such as earnings, child care, and health insurance subsidies. The impacts of this demonstration were increased income and work and positive outcomes for children that continued five years after the end of the program.

To close, Duncan asserted that there is little evidence on the effects of income in early life and shared a new study he is conducting in which low-income mothers with new-borns across various sites will be provided with unconditional cash transfers, and various child outcomes will be measured over the first few years of their lives.

Azzolini provided background on individual development accounts (IDAs) in Italy, a type of conditional cash transfer policy, and shared one particular example of how IDAs can

be used to finance and support enrolment in higher education among low-income students. Azzolini explained that while IDAs have traditionally been used in developing countries, more recently this technique has been used in more developed countries. The goal of IDAs is to support low-income families in exiting poverty by incentivizing savings in specific investments, such as housing or higher education. Eligible households or individuals will enrol in the program and are encouraged to save money on a regular basis. The IDA program will match the saved money by a certain multiplier, and the household or individual can then spend that saved and matched money for certain allowable expenses, such as housing or education. While Azzolini shared a few counterfactual evaluation studies on IDAs and their evidence, he also explained there is still little evidence of the effectiveness of these programs in Western countries.

Azzolini described the Affording College with the Help of Asset Building (ACHAB-Percorsi) policy experiment, in which the effectiveness of the asset-building program was tested among high school students from low-income families. Key elements of the Percorsi included that students had to be enrolled in the last two years of high school and had to save a given amount each month. The savings were matched 2:1 for high school expenses and 4:1 for higher education expenses. Savings could only be used for education-related expenses, and families had to play an active role in the savings process. The hope was that the program would have both direct and indirect effects on university enrolment, such as a reduction in financial constraints and also increased family involvement, financial planning, and student motivation.

Azzolini also highlighted the importance of targeting the right population for this program. They wanted to provide students who were at risk of giving up their university enrolment due to financial constraints, with the opportunity to participate in the program. To target the right population, the researchers predicted the probability of student enrolment based on an enrolment model from student data in Trento, Italy. The results indicate that those in the program participated in exams and enrolled for a second year at higher rates than the control group. One debate about the program was whether to include those that will most likely always enrol in university no matter the financial constraints in the program and the effect this inclusion would have on the effectiveness of the program.

To finish, Azzolini discussed a few points for additional consideration. He explained that further comparative and replication studies on IDAs are needed. Additionally, he shared a need for more research investigating the effects of early versus late interventions, the conditionality of the benefits, and whether the programs are universal or targeted to a certain population.

Heim spoke to the income strategies used to alleviate inequality in France. France provides generous direct transfers to low-income families, as well as tax credits on expenses such as childcare. Some of the strategies are targeted to education, while others are more general poverty alleviation programs. More recent experiments have high-quality research designs. Heim shared specific strategies related to improving college access, such as cash transfers based on characteristics such as parents' income, distance from university to home, the number of siblings in postsecondary education, and means-tested scholarships for low-income students. The research indicated that these need-based funds have an impact on enrolment rates and on persistence and degree completion. Heim questioned why so many students are still not enrolling in college and taking advantage of these resources and also highlighted that a modest cash transfer led in this case to relatively significant effects.

The group grappled with the sustainability of these interventions and how to create interventions that are applicable across contexts. Additionally, participants considered how various income strategies can affect segregation and how the families participating in certain programs understand the program and how that can affect the use of benefits and students outcomes.

Goal 1: Approaches to Addressing Inequality for Specific Subpopulations

Students with Disabilities and Special Education

During this breakout session, **Douglas Fuchs**, Professor and Nicholas Hobbs Chair in Special Education and Human Development at Vanderbilt University, United States, and **Mikko Aro**, Professor in the Department of Education at University of Jyväskylä, Finland, explored inclusion and lessening inequities among students who receive special education services and those who do not, both in the United States and Finland.

Fuchs explained that inclusionary practices have been the essence of U.S. policy in special education for the past 40 years. Central principles of Public Law 94-142, the legislative basis for inclusion passed in 1975, include Free and Appropriate Public Education (FAPE), which ensures inclusion of special needs students in public schools, and the concept of Least Restrictive Environment (LRE), a balance between placement with peers and the most beneficial learning environment for the student. Fuchs explained that over the years, LRE has become synonymous with general classrooms, and general classrooms have generally been considered the best placement for students.

Fuchs presented a series of four graphs that displayed the rates of inclusion of students and their levels of proficiency over time. He explained that the graphs suggest an absence in the relationship between general classroom placement and student achievement, countering the prevailing notion that general classrooms are what is best for students with disabilities. While the data is correlational and does not suggest that the general classroom was the cause of low achievement, Fuchs expressed the need for researchers and practitioners to acknowledge these findings. Fuchs is currently studying effects of inclusive instruction versus interventions for students with learning disabilities. Across the three randomized control trials, Fuchs and his colleague have found students receiving the intervention learned dramatically more than students in inclusive instruction.

Aro explained that since 2010 in Finland, there have been three levels of support for students in grades one through nine: general support (83.5% of students are receiving services), intensified support (9% of students), and special support (7.5% of students). Intensified and special support is provided on the basis of pedagogical assessment and evaluation, rather than medical diagnosis. All forms of support, such as remedial teaching and interpretive services, are available to students at all levels. Aro continued by describing the tools used to support learning and attendance of these students, such as the provision of student welfare services at the school and extensive part-time special education staff. Between 1994 and 2010, there has been a decrease in special schools and increase in inclusion in mainstream classrooms. Aro described a few challenges, such as the country's increase in poorly achieving students on PISA, achievement gaps between gender, and low achievement among second-generation immigrants.

Discussion among participants further investigated ideas of inclusion. The group agreed on the importance of considering the implementation and effects of inclusionary practices around the world. Fuchs expressed that some interventions are not accepted because they

are not focused on inclusion, and others explained the need for more research on practices other than just inclusion. The group also discussed that measurement for students with disabilities can be difficult, and that PISA needs to expand their measures to assess not only placement status, but also engagement, achievement, motivation, social relations, and self-concept among the student subpopulation. The group also discussed the need to think about transition from high school to postsecondary opportunities for these students and how preparation for that transition can start earlier.

Immigrant and Mobile Students

Nihad Bunar, Professor in the Department of Child and Youth Studies at Stockholm University, Sweden, and **Gábor Kertesi**, Head of the Education Economics Group in the Institution of Economics at the Hungarian Academy of Sciences, Hungary, shared research on interventions and policies related to immigrant, migrant, and newly arrived students in Sweden and Hungary.

Bunar said that in Sweden, 17% of the population is foreign-born, and 26% of elementary school children have parents who immigrated to the country. In 2015, Sweden had the highest percentage of unaccompanied minor migrants in the European Union, and the average age of migration was ten years old for children immigrating from Asia and Africa. Despite the country's wealth, segregation persists in both housing and school, and is exacerbated by school choice.

Bunar then explained the various levels of education in Sweden. Over 90% of children are enrolled in early education. All children have an equal right to education regardless of migration status, a right codified in legislation. In upper-secondary school, there are two primary interventions for immigrant students: direct immersion in mainstream classrooms; and separate instruction for a number of months or years, with at least 10% of students' time being spent in a mainstream classroom. Sweden has a language introduction program designed for newly-arrived students. Higher education is free for all students, and adult education eligibility is limited to only permanent residents. Bunar shared common themes within literature regarding newly arrived students. The first theme focused on the need to focus beyond just language acquisition for these students and view these students as more than just learners of language. The second theme was the need to look beyond barriers related to interrupted schooling, time of migration, cultural differences, socioeconomics, and attainment for newly arrived youth. The third theme was that rights and ideology cannot solely focus on "colour-blindness," but rather should acknowledge the unique experiences these students have and take those experiences into consideration when providing services.

Given the growing interest and dedication to support these students in Sweden, Bunar shared a few policy considerations. He explained the need for a national framework that can establish certain norms of practice, the need for a system that is flexible enough to adapt and accommodate to individual needs, and a system of clear responsibilities and accountability. He also reiterated the balance and tension between teaching these students language and continuing to develop other academic subject areas.

Bunar presented numerous promising practices for educational success for newly-arrived students, some of which included acknowledging these students as knowledgeable people with resources and capabilities worth developing, the important role of multilingual classroom assistants and academic advisors, multicultural professional development, and acknowledgement and attendance to issues of trauma and health.

In closing, Bunar provided suggestions for future research. These included more evaluation of programs for newly-arrived students and their achievement over time, increased cross-national comparisons, inclusion of the voices of refugees and their families, more research-informed policy making, and additional theoretical development in the issue area.

Kertesi began his presentation by explaining that similar to many immigrants in Western Europe, the Roma population faces strong prejudice, often despite having lived in Europe for a long period of time. The Roma population is one of the largest and poorest ethnic minorities in Europe. A representative survey of Hungarian adolescents indicates that large percentages of Hungarian youth believe that the Roma population poses a threat to society and should be segregated. Kertesi explained that Hungary is a good case study for this particular issue, given the significant Roma minority population, the available and high-quality administrative data, and the research-friendly environment in the country.

While gaps have narrowed in the past twenty years in the completion of primary education and enrolment and completion of secondary education between Roma students and the general population, there still remain large gaps between Roma and non-Roma students in test scores, secondary dropout rates, and college enrolment. Kertesi shared that the studies of Roma students in Hungary indicate the need for future research outside of Hungary for comparison and demonstrate that low educational performance is often a result of poverty and exclusion. Studies also indicate that segregated schools and classes negatively affect Roma students, and school choice may further segregate Roma students from their non-Roma peers.

To address segregation, Hungary implemented an Integrated Educational Program (IEP) starting in 2005 with approximately 4,000 students in which previously segregated classes were mixed and funding was conditional to integrating students. Yet the program began to decline after a few years, as certain financial incentives to integration were removed and quality control and measurement of the program lessened.

Kertesi concluded by recommending that researchers, practitioners, and policymakers take note of certain practices that are known to produce positive outcomes for disadvantaged students and adapt these for Roma students. He also noted that compensatory programs can help, but also emphasized the need to address systemic problems that perpetuate Roma discrimination, prejudice, and segregation.

Following the presentation, the group further interrogated a few key themes from the presentations. In order to address bias and discrimination in school, the group discussed the importance of professional development in tackling discrimination. Bunar emphasized the need for teacher training programs to provide classroom experiences and a diversity of exposure to trainees. When asked which practice in Bunar's presentation had the most promising research and evidence to support it, Bunar shared his support and excitement surrounding the effectiveness of multilingual classroom assistants. The session closed with both presenters stating that despite research evidence, the political climate remains important in how policies are made to support immigrant, migrant, and newly-arrived students.

Highlights

- While there are no silver bullets, many interventions show promise in reducing inequality and gaps in student achievement
- Variation in student outcomes may provide clues for further investigation regarding what might work to reduce inequality
- Context matters. We need to pay attention to differentiated implementation, including universal vs. targeted approaches, variations in service intensity, and other factors
- We need to encourage closer collaboration between researchers and practitioners
- We need to anticipate the possibility that some innovative ideas, such as full inclusion for special needs students, or the use of technology, may have unintended consequences.

Goal 2: The Role Researchers Can Play in Developing Effective Policy Responses to Educational Inequality

How Evidence from Research is used in Policy

The panel consisted of **Frank Brogan**, Deputy Assistant Secretary, Delegated the Duties of the Assistant Secretary for the Office of Planning, Evaluation and Policy Development, U.S. Department of Education; **Jeroen Backs**, Head of Strategic Policy Division, Flemish Department of Education and Training, Belgium; **Daniel Hernández**, Academic Development Sectorial Coordinator for Upper Middle Education, Secretariat of Public Education, Mexico, and **Anna Ambrose**, Director of Education, Swedish National Agency for Education. They discussed five key issue areas related to use of research in policy: the use of evidence to continue to inform and reframe research questions; use of research to inform long-term strategy; the importance of collaboration between researchers, practitioners, and policymakers, especially across sectors; the effective translation of research for the public and policymakers; and the use of research for both instrumental and conceptual purposes.

Brogan shared that the breakout sessions highlighted that while a wealth of evidence exists in various areas, there is still much to investigate. Research does not have a beginning or end, but rather is a cycle of learning and identifying new problems of practice to study further. He discussed that one of his office's main responsibilities is to identify quality research and effectively share and disseminate it so it can be implemented.

Similarly, Hernández highlighted that ideally the best research should be used to design policy and continue to reframe research questions. As a policymaker, he finds one of his main responsibilities is translating research so it is relevant and comprehensible to other policymakers and to the public. While he expressed a need for policymakers to be honest and admit which questions and issues need more research and evidence, he also emphasized the need to invest time in identifying evidence from other contexts and understanding if it would be scalable and cost-effective within their own context.

Backs explained that to support the Minister and the Department of Education, his team must keep long-term strategy in mind. Due to the fact that leadership can change periodically, his office must think of long-term goals by looking at trends in society and their impact on the education system. Ambrose also expressed that she uses research to create sustainable policy. Backs also discussed that Belgium's constitution includes articles about education, and thus policy must be aligned with those rights. Rather than considering policy "evidence-based" he preferred the term "evidence-informed," saying that education policy is created with both research knowledge and ideology.

Several panelists described examples of collaboration between researchers, practitioners, and policymakers that helped to tackle educational issues. Hernández shared that in order to encourage the use of research, he had to advocate for projects across ministries and sectors, convincing those dealing with health and social policy issues that the research was useful and applicable to their work as well.

The group reflected that while instrumental research is often the aspiration, conceptual research (i.e. research that changes how we understand or think about a problem) may be more realistic and just as important.

The panel of policymakers also provided some advice to the researchers at the meeting. The policymakers further emphasized the need to research the "black box" of the classroom, to better understand teaching and learning. Backs highlighted that while research methods and findings can be very complex, researchers must work on communicating those findings and their implications to policymakers in plain language. The group agreed that research must be operationalized and implemented in order for it to have an impact on student outcomes and reducing inequality.

Goal 3: Areas for Additional Research and Future Collaboration

Throughout the convening participants discussed common challenges to reducing educational inequality, such as economic inequality, school segregation, disparities in access to early childhood care, teacher preparation, funding and resource distribution, and ensuring completion of secondary and transition to postsecondary education and training. Given these challenges and the multitude of approaches and interventions presented, the convening concluded with a discussion of areas for future research and international collaboration. This could be research conducted by individuals, departments, or ministries of education or research questions to tackle through international bodies like the OECD. One group of participants focused on identifying descriptive and exploratory studies to better understand root causes of inequalities, while the second group focused on interventions and evaluations to more directly inform policymaking. To close, members from the four organizations hosting the conference shared their lessons learned, ideas for further inquiry, and suggestions for how the convening could have been improved.

Descriptive and Exploratory Studies

One group was asked to identify three topics worth exploring in descriptive and exploratory studies and crafting a research question(s) for each topic.

Diving into the "Black Box" of Education: What Happens in the Classroom

There was disagreement among participants about the amount of evidence available to understand what goes on in the classroom and its effect on student outcomes. The group

acknowledged the need for more research to understand new skill domains, such as problem solving, creativity, critical thinking, and interpersonal skills. Participants also discussed the need for continued research on the effects of inclusive practices on student outcomes for students with disabilities.

Research Question: What is the association between instructional practices and a range of outcomes for new skill domains (problem solving, interpersonal skills, etc.)? And how does it affect underprivileged students?

The conversation about uncovering what happens in the classroom also centred on teachers. Participants voiced the need for more data collection on teacher preparation programs and a better understanding of classroom management styles and how teachers address diversity and multiculturalism in their classrooms. Further, the group identified the need to better understand the learning process and how to reach students who are past the "peak" age for learning certain skills. There was also interest in how to effectively implement best practices, especially in classrooms with different resources, how to transition teachers, how to address professional development strategies, and how best to determine the dosage of different experiences during teacher preparation programs so that teachers can be successful in the classroom.

Research Question: What is the association between teacher preparation and student outcomes? What are the similarities and differences across countries? Do some types of teacher preparation improve results for underprivileged students?

Early Childhood: Inequality of Outcomes Based on Poverty

In acknowledging early childhood education as one medium of intervention, the group emphasized the importance of considering how poverty affects children and young adults at different points in their development. Participants mentioned the Gatsby Curve that illustrates that countries with more dispersion of wealth have higher rates of child economic mobility. By using the longitudinal research that does exist, the group agreed that researchers can better understand the effects of systems and how studies that have been conducted or are in process can further inform the field. Participants emphasized the importance of data sharing across systems, of conducting both qualitative and quantitative research, and ensuring that research is shared with practitioners and other stakeholders.

Research Question: What is the relationship between poverty and early developmental, cognitive, health, and other outcomes within and across nations?

Communities and Schools

Participants expressed a desire for research to delve deeper into the associations between communities and social and educational conditions, as well as the effects that programs have not only on students, but also their communities and systems. Some ideas included the role of social capital within communities, investigating other places where children learn and how those learning environments are structured, exploring what education can

learn from the health field with regard to addressing the needs of rural communities, and the ways in which communities find solutions to address educational inequity.

Research Question: How are community-level outcomes related to conditions both inside and outside schools?

Interventions and Evaluations

A second group identified questions to be addressed and potential routes of further inquiry as researchers craft interventions and evaluations to address educational inequality. The group agreed that researchers should build upon current strengths, like randomized controlled trials (RCTs) and how RCTs can be leveraged to create greater bodies of evidence. Also with regard to methodology, the group discussed tensions between testing mechanisms versus testing policies and how theories of change guide interventions and therefore the policies. The group also questioned how different models, approaches, and interventions can become scalable and how that affects replication of studies. Additionally, participants discussed a desire to understand how interventions can be successfully layered across one another throughout the lifespan of a student. The group mentioned the need to be intentional about the subgroups examined how they are chosen, how they intersect with other subgroups, and how the given category may be a proxy for disadvantage.

Similar to those discussing descriptive and explanatory studies, doing more research on what happens in the classroom and fostering a culture of experimentation in the field was encouraged. That being said, the group also encouraged researchers to make use of and appreciate the bodies of evidence that already exist and use international comparisons to understand basic processes that transcend borders. One participant mentioned that the International Initiative for Impact Evaluation (3ie) has done an evidence gap map for primary and secondary education, and Campbell Collaboration is in the process of creating evidence gap maps on various topics such as interventions for child abuse and neglect, displaying what research has been done and where. The group concluded by emphasizing the continued need to think about how to translate research to policymakers.

Concluding Remarks

Panelists from the convening organizations shared their reflections about what the field needs to continue to work on. The panel consisted of **Peggy Carr**, Acting Commissioner, National Center for Education Statistics, Institute of Education Sciences, **Stephen Fraser**, Director, International Partnerships, Education Endowment Foundation, **Adam Gamoran**, President, William T. Grant Foundation, and **Deborah Roseveare**, Head of Innovation and Measuring Progress Division, Directorate for Education and Skills, OECD. These reflections included focusing on within-school variation, becoming more effective with how research is done and how it can be produced in a timely manner, focusing on structures outside of the classroom that affect outcomes, and the need to become more consistent as a field with what "good" research really looks like. While various topics might have lots of evidence, the evidence base itself is not always aligned or in agreement.

The panel also offered critical feedback on how the convening could have been improved. Carr emphasized that although Schleicher had established definitions for equity and equality at the beginning of the convening, the terms were used interchangeably during the rest of the meeting. Carr echoed comments she had heard in earlier sessions, mentioning that researchers and policymakers need to remain constantly critical of their work and not over-celebrate success when deep inequalities still remain around the world. She also wished the convening had discussed the role of technology in education at greater depth. Roseveare wished for more discussion on the role of environmental factors on brain development and discussion of intergenerational dynamics that affect student achievement. She also highlighted the need to include students in this conversation and for researchers to value the student perspective as they continue research. Fraser mentioned his surprise that professional learning was not a larger part of the conversation. Gamoran mentioned he wished the group had grappled with the limited investment in evidence for education and discussed how other sectors have developed larger investment and value of evidence in their fields.

To conclude the conversations on a positive note, the panelists also shared what inspired them. Carr was encouraged by the trends from Schleicher and Reardon's presentations, demonstrating that poverty is not destiny and their deep investigation of which social disadvantages account for different gaps in achievement. Gamoran was also heartened by the progress the United States has made in educational equity, the achievement gains for students in Chicago, and Allen's discussion of school choice that demonstrated that regulatory intervention is needed to ensure that school choice does not reinforce segregation and inequality. Finally, there was general agreement on the value of continuing this dialogue on effort to reduce inequality and achievement gaps in education in OECD countries, perhaps through a future conference or virtual meetings.

Annex A.
Meeting Agenda

Meeting Agenda

11 December 2017

09:00 – 09:10   Welcome (Plenary) (Admiral's Ballroom)

- **Thomas Brock,** Commissioner, National Center for Education Research,Delegated the Duties of Director, Institute of Education Sciences, United States.

09:10 – 10:00   *Session 1:*

Defining and measuring inequality across the OECD (Plenary) (Admiral's Ballroom).

- **Andreas Schleicher,** Director for the Directorate for Education and Skills, OECD, France.

- **Sean Reardon,** Professor of Poverty and Inequality in Education, Stanford Graduate School of Education, United States.

To open the meeting, this session will feature presentations on the United States and OECD trends regarding educational inequality, highlighting different ways of defining and measuring educational inequality.

10:00 – 10:10   Welcome and Remarks (Plenary)(Admiral's Ballroom).

- **Betsy DeVos,** United States Secretary of Education, United States.

10:10 – 11:15   *Session 2:* (Admiral's Ballroom).

Public and private school choice as responses to inequality: international perspectives (Plenary).

- **Rebecca Allen,** Professor and Director, Centre for Education Improvement Science, UCL Institute of Education, United Kingdom.

- **Gregory Elacqua,** Principal Education Economist, Inter-American Development Bank, United States.

Facilitator:

- **Thomas Brock,** Commissioner, National Center for Education Research, Delegated the Duties of Director, Institute of Education Sciences, United States.

This session will consider innovative approaches to school choice and examine their contributions to higher performance and smaller learning and attainment gaps. The cases of the United Kingdom, the Netherlands and Chile will be examined. What lessons does the international experience offer as this issue reaches the forefront of United States policy concerns? How can school choice be used as a response to inequity, and in what conditions can it work?

11:15 – 11:30   Break

11:30 – 12:45   ***Session 3:*** Community- and school-level responses to inequality (Breakouts).

Many policies to reduce educational inequality aim to fight the negative influence of neighbourhoods that are either socially or ethnically segregated. One reason is related to possible negative peer effects, either within schools or within neighbourhoods. Each of these breakout sessions will discuss neighbourhood- or school-level responses to inequality and the factors that make these policies more or less effective.

3a: Special education (East Wing)

Speaker/Facilitators:

- **Douglas Fuchs,** Professor and Nicholas Hobbs Chair in Special Education and Human Development, Vanderbilt University, United States.

- **Mikko Aro,** Professor, Department of Education, University of Jyväskylä, Finland.

For several decades, "inclusion" has strongly influenced the special education policy environment in the United States and in other countries. In the United States, it has benefitted many special-needs children, but it has also weakened the education of many others. In this session, these mixed outcomes will be discussed and compared to inclusion in Finland to frame a conversation about how best to develop an appropriate education for all children and youth with disabilities.

3b: Comprehensive school and neighbourhood services to reduce educational inequality (Admiral's Ballroom).

Speaker/Facilitator:

- **Diane Schanzenbach**, Professor, School of Education and Social Policy, Northwestern University, United States.

Increasing attention is being paid to interventions outside of the classroom – such as health interventions and family income support programs – as mechanisms to close achievement gaps. This session will discuss various comprehensive service approaches, including their impacts and funding streams.

3c: Early Childhood programs to reduce inequality in school readiness (West Wing).

Speakers/Facilitators:

- **Caroline Ebanks**, Team Lead for Early Childhood Research, Institute of Education Sciences, United States.

- **Paul Leseman**, Professor, Department of Education & Pedagogy, Utrecht University, Netherlands.

Children's early childhood experiences have immediate and lasting consequences for their learning and development. In the United States, research has shown that participating in high-quality early childhood programs is beneficial for young children, especially children from at-risk backgrounds. This session will focus on the research base for the role of early childhood programs in narrowing school readiness gaps. The group will discuss current early childhood policies and practices in different countries and implications for future research.

12:45 – 13:45   Lunch

13:45 – 15:15   ***Session 4:*** School- and classroom-level responses to educational inequality: changing the schooling experience (Breakouts).

What do we know about the role of school resources, teachers and teaching on the reduction of educational inequality? Do teachers sometimes inadvertently contribute to the widening of educational inequality, for example by expecting less from students from under-privileged backgrounds? What innovative models of teaching seem to better work for children from less privileged backgrounds? To what extent do some types of pedagogies work better for some socio-economic groups? These breakout sessions will examine conditions and practices that are likely to reduce inequality of educational outcomes by socioeconomic and ethnic background.

4a: Education technology to improve education outcomes (Admiral's Ballroom).

Speaker/Facilitator:

- **John F. Pane**, Distinguished Chair in Education Innovation and senior scientist in RAND Education, United States.

- **Christophe Gomes**, Deputy Director, Agir pour l'école, France.

Education technology is a potential tool to personalize instruction and deliver high-quality educational experiences to students from all backgrounds. This session will focus on what research has found to be the benefits and limitations of education technology to improve education outcomes and reduce achievement gaps, and identify new questions to be explored.

4b: Behavioural strategies that minimise inequality (East Wing).

Speakers/Facilitators:

- **Emily Doolittle**, Team Lead for Social Behavioral Research, Institute of Education Sciences, United States.

- **Jacquelyn Buckley**, Research Scientist, Institute of Education Sciences, United States.

This session will focus on the relationship between student behavior and academic performance, and highlight promising programs and practices that support inclusive learning environments for students from

all backgrounds. A particular focus will be on programs to minimize discipline disparities in schools.

4c: The role of professional learning in reducing inequality – what professional learning structures and processes work to reduce inequality? (West Wing)

Speaker/Facilitator:

- **Lynne Vernon-Feagans,** Senior Research Scientist, University of North Carolina, United States.

The session will aim to identify from among participant countries the evidence and innovations for more effective professional learning approaches, with a particular focus on building expertise in practices that reduce disparities in outcomes.

15:15 – 15:30   Break

15:30 – 16:30   ***Session 5:*** results from breakout sessions: what do we know about neighbourhood-, school- and classroom-level responses that reduce inequality? What are the policy and research implications? (Group discussion).

Facilitators:

- **Adam Gamoran,** President, William T. Grant Foundation, United States

- **Stephen Fraser,** Director, International Partnerships, The Education Endowment Foundation, United Kingdom

Which strategies show the most promise in reducing inequality? What strategies do we need to learn more about? A general facilitated discussion will ensue. What are the institutional research and innovation models that help develop evidence to design effective policies? Tiered evidence strategies and research/practitioner partnerships are two approaches that are being used in the United States. What are other approaches for supporting innovation and use of evidence?

16:30 – 17:15   ***Session 6:*** Implications for policy - Day 1 wrap-up (Plenary)
(Admiral's Ballroom)

Facilitator:

- **James Turner,** Deputy Chief Executive, The Education Endowment Foundation, United Kingdom.

Panelists:

- **Ebony Lee,** Chief Policy Advisor to Betsy DeVos, United States Secretary of Education, United States.

- **Jeroen Backs,** Head of Strategic Policy Division, Flemish Department of Education and Training, Belgium.

- **Daniel Hernández,** Academic Development Sectorial Coordinator for Upper Middle Education, Secretariat of Public Education, Mexico.

- **Anna Ambrose,** Director of Education, Swedish National Agency for Education.

12 December 2017

08:55 – 09:00 Welcome (Admiral's Ballroom).

- **Stéphan Vincent-Lancrin**, Deputy Head of the Innovation and Measuring Progress Division, Senior Analyst and Project Leader, Center for Educational Research and Innovation, OECD, France.

09:00 – 10:30 *Session 7:* Immigration and family mobility (Plenary) (Admiral's Ballroom).

Speakers:

- **Nihad Bunar,** Professor, Department of Child and Youth Studies, Stockholm University, Sweden.

- **Gábor Kertesi,** Head of the Education Economics Group, Institute of Economics, Hungarian Academy of Sciences, Hungary.

Facilitator:

- **Stéphan Vincent-Lancrin**, Deputy Head of the Innovation and Measuring Progress Division, Senior Analyst and Project Leader, Center for Educational Research and Innovation, OECD, France.

What does research tell us about effective interventions and policies for children from immigrant families? What are the different approaches adopted in different countries, and with what success? The cases of migrants in Sweden and Roma children in Hungary will be presented to start the discussion.

10:30 – 10:45 Break

10:45 – 12:15 *Session 8:* Income support strategies to reduce inequality (Plenary) (Admiral's Ballroom).

Speaker:

- **Greg Duncan,** Distinguished Professor, School of Education, University of California, Irvine, United States.

Respondents:

- **Davide Azzolini,** Researcher, Research Institute for the Evaluation of Public Policies, Italy**.**

- **Arthur Heim,** Project Manager, France Strategie, France.

Facilitator:

- **Stephen Fraser,** Director, International Partnerships, Education Endowment Foundation, United Kingdom.

A number of countries are currently experimenting with various income support strategies as a way to help children get an even start in life and reach their potential. Some are aiming for a universal basic income while others emphasize guaranteed child support. In the United States, efforts to promote a minimum wage have faltered, but there is bipartisan support for the current policy of an earned income tax credit. Which of these studies have yielded positive outcomes for young people?

12:15 – 13:15 Lunch

13:15 – 14:45 *Session 9:* Groundwork for future research and international collaboration (Breakouts) (Admiral's Ballroom and East Wing).

Facilitator: **Stephen Fraser**, Director, International Partnerships, Education Endowment Foundation, United Kingdom.

For this session, participants will divide into two groups to discuss a future research agenda based on ideas presented in the meeting. One group will focus on exploratory and descriptive studies and the other will focus on interventions and evaluations. Participants will nominate facilitators within their groups. Participants will also be asked to document their ideas and feedback, noting promising topics for further study.

14:45-15:15 Concluding remarks and wrap-up (Plenary)

What are the issues and topics that are most urgent or promising for further study? What are some next steps to consider?

Facilitator:

- **Thomas Brock,** Commissioner, National Center for Education Research, Delegated the Duties of Director, Institute of Education Sciences, United States

Speakers:

- **Adam Gamoran,** President, William T. Grant Foundation, United States.

- **Stephen Fraser,** Director, International Partnerships, Education Endowment Foundation, United Kingdom.

- **Deborah Roseveare,** Head of the Innovation and Measuring Progress Division, Directorate for Education and Skills, OECD, France.

- **Peggy Carr,** Acting Commissioner, National Center for Education Statistics, Institute of Education Sciences, United States.

15:15 Close

Annex B.
List of Participants

Participants list for Using Educational Research and Innovation to Address Inequality and Achievement Gaps in Education

Washington , United States , 11/12/2017 - 12/12/2017

Please note that, in this list, countries only indicate the origin of the participants. Participants are not necessarily delegates representing their countries.

Australia

1.	Mr. Anthony MURFETT	Minister Counsellor (Industry, Science and Education) Australian Embassy, Washington DC

Belgium

2.	Mr. Jeroen BACKS	Head of Division Education & Training Department Flemish Department of Education and Training

Canada

3.	Ms. Vivian WELCH	Editor in Chief Campbell Collaboration

Finland

4.	Mr. Mikko ARO	Professor University of Jyväskylä
5.	Ms. Aija RINKINEN	Senior Ministerial Adviser Ministry of Education and Culture

France

6.   Mr. Christophe GOMES   Deputy Director
                                                   Agir pour l'école

7.   Mr. Arthur HEIM   Project Manager
                                                   France Stratégie

Hungary

8.   Mr. Gábor KERTESI   Head of the Education Economics Group
                                                   Institute of Economics of the Hungarian Academy of Sciences

Ireland

9.   Ms. Susan WEIR   Research Fellow
                                                   Educational Research Centre

Israel

10.   Mr. Yossi SHAVIT   Professor
                                                     Tel Aviv University, Department of Sociology

Italy

11.   Mr. Davide AZZOLINI   Researcher
                                                     Research Institute for the Evaluation of Public Policies
                                                   FBK-IRVAPP

Japan

12.   Mr. Akito OKADA   Professor
                                                    Tokyo University of Foreign Studies

Mexico

13.	Mr. Daniel HERNÁNDEZ	Academic Development Sectorial Coordinator for Upper Middle Education Secretariat of Public Education
14.	Mr. Alejandro MIRANDA	Advisor in chief Secretariat of Public Education Mexico

Netherlands

15.	Mr. Ton KLEIN	Director Oberon Research and Consultancy BV Netherlands
16.	Mr. Paul LESEMAN	Professor of Education Utrecht University
17.	Ms. Sandra TEN HOLTER	Senior policy advisor Ministry of Education, Culture and Science Netherlands

Spain

18.	Ms. María José FABRE GONZALEZ	DG Evalación y cooperación territorial SG de Ordenación académica Ministry of Education, Culture and Sport
19.	Mr. Alberto GARCÍA SALINERO	Conseiller Technique Office d'Education à Washington

Sweden

20.	Ms. Anna AMBROSE	Director of Education Swedish National Agency for Education

21.	Mr. Nihad BUNAR	Professor Department of Child and Youth Studies Stockholm University

United Kingdom

22.	Ms. Rebecca ALLEN	Researcher, Reader in Economics of Education Education DataLab, UCL Institute of Education
23.	Mr. Stephen FRASER	Director, International Partnerships The Education Endowment Foundation
24.	Mr. James TURNER	Deputy Chief Executive The Education Endowment Foundation

United States

25.	Ms. Jenn BELL- ELLWANGER	Director of Policy and Program Studies Service United States Department of Education
26.	Mr. Bob BORUCH	University Trustee Chair Professor University of Pennsylvania
27.	Mr. Jason BOTEL	Principal Deputy Assistant Secretary for Elementary and Secondary Education United States Department of Education
28.	Ms. Betsy BRAND	Executive Director American Youth Policy Forum
29.	Mr. Thomas BROCK	Commissioner, National Center for Education Research Institute of Education Sciences (IES) United States Department of Education

30.	Mr. Frank BROGAN	Deputy Assistant Secretary Delegated the Duties of the Assistant Secretary for the Office of Planning, Evaluation and Policy Development United States Department of Education
31.	Ms. Jacquelyn A. BUCKLEY	Team Lead for Disability Research Institute of Education Sciences(IES) United States Department of Education
32.	Ms. Peggy CARR	Acting Commissioner, National Center for Education Statistics Institute of Education Sciences (IES) United States Department of Education
33.	Mr. Brian CRAMER	Research Associate II Optimal Solutions Group
34.	Ms. Betsy DE VOS	Secretary of Education United States Department of Education
35.	Mr. Enis DOGAN	Senior Education Research Scientist National Center for Education Statistics Institute of Education Sciences(IES) United States Department of Education
36.	Ms. Emily DOOLITTLE	Team Lead for Social Behavioral Research Institute of Education Sciences (IES) United States Department of Education

37.	Mr. Greg DUNCAN	Distinguished Professor School of Education, University of California
38.	Ms. Caroline EBANKS	Team Lead for Early Childhood Research National Center for Education Research Institute of Education Sciences (IES) United States Department of Education
39.	Mr. Gregory ELACQUA	Principal Education Economist, Inter-American Development Bank
40.	Mr. Douglas FUCHS	Professor Vanderbilt University
41.	Mr. Adam GAMORAN	President William T. Grant Foundation
42.	Ms. Loretta GOODWIN	Senior Director American Youth Policy Forum
43.	Ms. Jesse KANNAM	Policy Research Assistant American Youth Policy Forum
44.	Ms. Ebony LEE	Deputy Chief of Staff for Policy United States Department of Education
45.	Ms. Felice LEVINE	Executive Director American Educational Research Association
46.	Ms. Julia LITTELL	Professor Bryn Mawr College

47.	Mr. Jim MCKENNEY	Workforce Institute, Inc. Senior Consultant
48.	Ms. Joan MCLAUGHLIN	Commissioner, National Center for Special Education Research Institute of Education Sciences (IES) United States Department of Education
49.	Ms. Maureen MCLAUGHLIN	Director of International Affairs United States Department of Education
50.	Ms. Lauren MUSU-GILLETTE	Statistician National Center for Education Statistics Institute of Education Sciences (IES) United States Department of Education
51.	Mr. John PANE	Distinguished Chair in Education Innovation and senior scientist RAND Education
52.	Mr. Sean REARDON	Professor of Poverty and Inequality in Education Stanford Graduate School of Education
53.	Ms. Anne RICCIUTI	Deputy Director for Science Institute of Education Sciences (IES) United States Department of Education
54.	Ms. Aaliyah A. SAMUEL	Director, Education Division National Governors Association Center for Best Practices
55.	Ms. Diane SCHANZENBACH	Professor Northwestern University, Chicago IL
56.	Ms. Barbara SCHNEIDER	John A. Hannah Chair and University Distinguished Professor Michigan State University

57.	Ms. Shannon SHIPMAN	Director of Events and Operations American Youth Policy Forum
58.	Mr. Thomas SNYDER	Director, Annual Reports and Information Staff National Center for Education Statistics Institute of Education Sciences (IES) United States Department of Education
59.	s. Sara TRETTIN	Policy Advisor U.S. Department of Education
60.	Ms. Lynne VERNON-FEAGANS	Senior Research Scientist University of North Carolina

OECD

61.	Ms. Deborah ROSEVEARE	Head of the Innovation and Measuring Progress Division Directorate for Education and Skills
62.	Mr. Andreas SCHLEICHER	Director for the Directorate for Education and Skills and Special Advisor on Education Policy to the SG EDU
63.	Mr. Stéphan VINCENT-LANCRIN	Deputy Head of the Innovation and Measuring Progress Division, Senior Analyst and Project Leader Directorate for Education and Skills

Trade Union Advisory Committee (TUAC)

64.	Ms. Stacey PELIKA	Director of Research Research National Education Association (NEA)