

Basic Information

Approval Year	: 2017	Region	: REG
Team Leader	: Busso, Matias	Country	: Regional
Taxonomy	: Research and Dissemination	Department	: RES
Fund	: KPR	Sector	: ED - Secondary Education
Approval Number	: ATN/KP-16145-RG	Sub Sector	: SEC
Execution Agency	: US-IDB		
Execution Status	: Closed		
Operation Objective	: This Technical Cooperation (TC) proposes to conduct a series of case studies both in Latin America and South Korea to then be able to provide a relevant and timely comparative analysis of the effects that different student and teacher assignment mechanisms (to classrooms and schools) have on student academic performance and future trajectory. Now that enrollment in primary school is almost universal in several countries in the Latin American and Caribbean region (Bassi, Busso and Muñoz, 2015), the current pressing challenges are improving learning and access to quality education at the lowest cost. The research generated under this TC will thus be an important input in the design of cost-effective policies with these two goals in mind that can build on the existing systems of teachers and students allocations to schools and classrooms. The objectives and activities included in this TC are closely linked to the goals of the Sector Framework Document of Education and Early Childhood Development, as well as the Strategy on Social Policy for Equity and Productivity.		

Financial Information

RG-T2764

ATN/KP-16145-RG:KPR	Original	Current	% of Current Amount Financed
Amount Financed	\$600,000.00	\$573,719.84	
Disbursed Amount	N/A	\$573,719.84	100.00 %
Commitments not yet disbursed Amount	N/A	-	0.00 %
Available Amount	N/A	-	0.00 %
Final Disbursement Date	Aug 16, 2022		

Status Update

This Technical Cooperation has achieved three significant objectives. Firstly, it has provided direct support to Ministries of education in Mexico, Colombia, and Peru by assisting with internal processes and advising on policy design. Secondly, it has produced high-quality research outputs - a key mission of the IDB and its research department. Lastly, it has facilitated the transfer of knowledge, expertise, and business opportunities from South Korea to the region. In Mexico, the first component of this Technical Cooperation (TC) enabled the Bank to provide guidance and support to the Secretaria de Educación Pública (SEP) of Mexico City in the implementation and organization of their student allocation system for schools and classrooms. This system was evaluated in the paper Busso and Frisancho (2023) which is one of the outputs of this TC. This paper assessed the impact of allocating students in homogeneous and heterogeneous classrooms on learning outcomes in the short and medium term. Through coordination with the SEP, the largest randomized control trial in the region was implemented to evaluate the effectiveness of alternative classroom allocations. The findings showed that both allocations can be successful, but low-achieving students require additional investments to improve their learning outcomes. Another output of this TC, Busso and Frisancho (2022), examined the gender dimension of student classroom allocations and revealed that high-achieving girls can improve academic outcomes of low-performing girls through a positive effect on exam scores. This first component also enhanced the SEP's existing capabilities and developed new ones. For example, it helped the SEP to identify and resolve certain problems in the algorithm's implementation, provided information about the quality of the standardized tests used for student assignment, streamlined internal protocols, developed and piloted a software to automate the allocation of students to classrooms, trained SEP officials on how to use it and supported the SEP in implementing various education innovations such as "Expande tu Mente" and "Tertulias Literarias". Additionally, some lessons learned from South Korea, which has a long history of using central allocation mechanisms to assign students to schools, were used and published as an IDB technical note (Lee and Koh, 2020a). The second component of this TC was crucial in assisting the Ministries of Education in Colombia and Peru with their teacher recruitment and selection processes. In Peru, the Bank collaborated with government officials to design an intervention aimed at encouraging highly motivated students to enter the teaching profession. The intervention, which was delivered in secondary schools, was evaluated through a randomized control trial and found to be effective, as detailed in a report by Alfonso, Busso, Nopo, and Yentzen (2023). Additionally, the TC provided support to the Ministry of Education in Colombia, including signing a data exchange agreement to improve data management and analyzing the general equilibrium effects of a 2005 teacher career reform on student learning outcomes, as detailed in a forthcoming report by Busso, Montano, Munoz, and Pope (2023). The results of this analysis were shared in a workshop in late 2022 and the collaboration with the ministry continues. The TC also produced a technical note, drawing on lessons from South Korea, as documented in Lee and Koh (2020b). The third component of this TC aimed to identify and evaluate cost-effective interventions at the school level. In 2018, the bank provided funding for a consultancy to identify potential interventions and, in coordination with the Ministry of Education of Peru, piloted the most promising ones such as Conecta Ideas, Monitoreo de Aprendizaje, SMS for parents, and Expande tu Mente in two schools. The government subsequently agreed to scale up the interventions and evaluate them through a randomized controlled trial in 2019. This TC served as the foundation for a separate TC (PE-T1431) and an ongoing collaboration with GRADE-Peru (which can be found at <https://www.conectaideasperu.com/>). By 2021, 65,000 students had used the Conecta Ideas app, with that number increasing to 76,000 in 2022. The fourth component of the TC was designed to disseminate the evidence produced by the project. To that end, we have developed a website SkillsBank (temporarily hosted here: <https://test-skillsbank20.pantheonsite.io/en> and <https://test-skillsbank20.pantheonsite.io/es>) which serves as a platform of evidence-based policy in education and many of the lessons of this TC. In addition, we published 3 technical notes which describe the meta-analytic methodology followed to search, filter, cure and codify the evidence in the SkillsBank. A second important tool for disseminating the results were presentations given on multiple occasions to Ministries of education of Mexico city, Colombia, and Peru describing and discussing the results of the papers, technical notes, and policy notes produced by the project. In addition, we have presented the papers in seminars and conferences on multiple occasions. All papers are being subjected to peer review evaluations before being published. The TC has enabled the Bank to provide advice so that to enhance the performance of processes and programs in three government agencies, namely the Ministry of Education of Mexico City, the Ministry of Education of Colombia, and the Ministry of Education of Peru. Additionally, it has generated valuable data, evidence, and knowledge that benefits the region as whole. This includes the production of 8 papers, 5 technical notes, 4 policy notes, survey instruments, student-level and teacher-level datasets, and more.

Advance in the Achievement of Outcome and Outputs

Advance in the Achievement of Outcome

1 . Foster learning regarding strategies to improve education outcomes in LAC schools

All activities were finalized as planned. We produced more papers, datasets and presentations than the original proposal. We will publish few other papers in 2023 as well as finalizing the publication of the website SkillsBank.

Advances in Execution
1. Improving learning via students’ allocation to schools and classes in Mexico and Korea.
Component Cost: \$255,000

Output Indicator	Indicator Detail	Unit Of Measure	Baseline	Baseline Year	Means Of Verification	Theme	Year	P	P(A)	A
1.1 ^s Working Papers prepared	Other (KPR)	Papers (#)				Social Development	Physical			
							2017	0		
							2018	0		0
							2019	1		0
							2020	1		1
							2021	1		1
							2022			1
							EOP 2022	3	0	3
							Financial			
							2017			
							2018			
							2019			
							2020			
							2021			
							2022			
							EOP 2022	70000	70000	56094

Advances In Execution: Paper 1. We published 1 working paper co-financed 80% with this TC and 20% with project RG-K1415, IDB-WP-1220 "Good Peers Have Asymmetric Gendered Effects on Female Educational Outcomes: Experimental Evidence from Mexico" IDB Working Paper EZSHARE-1891014228-1063. This paper was subjected to peer-review and published in the Journal of Economic Behavior and Organization. <https://doi.org/10.1016/j.jebo.2021.07.013> Paper 2. We have finalized a second paper analyzing the effect of students’ allocations to classrooms more broadly. In the paper "Ability Grouping and Student Performance: Experimental Evidence from Middle Schools in Mexico" (IDB-WP-01434) we evaluate the effects on student learning of tracking and heterogenous classrooms. EZSHARE-1680373482-67. This paper has been submitted for publication and submitted to peer-review to the Quarterly Journal of Economics. Paper 3. We have finalized a first draft of a third paper (not originally part of the component but produced with data collected as part of it) studying the determinants of student learning and classroom management (using lab-in-the-field experiments). The paper "How does peer-to-peer learning happen? Experimental evidence from Mexico" is in progress and likely it will be submitted for publication as an IDB Working paper in 2023. An unpublished research report showing the initial results was uploaded as a deliverable. EZSHARE-1680373482-75 Intermediate results of these papers were presented to the Secretaria de Educación Publica in Mexico on multiple occasions.

Output Indicator	Indicator Detail	Unit Of Measure	Baseline	Baseline Year	Means Of Verification	Theme	Year	P	P(A)	A
1.2 ^s Technical notes created	Other (KPR)	Notes (#)				Social Development	Physical			
							2017	0		
							2018	1		1
							2019	1		1
							2020	0		1
							2021	1		1
							2022			0
							EOP 2022	3	0	4
							Financial			
							2017			
							2018			
							2019			
							2020			
							2021			
							2022			
							EOP 2022	40000	40000	40000

Advances In Execution: Technical Note 1. "Lessons for Latin America from a Comparative Education Approach: South Korea’s K-12 Education System" was published in April 2020. <http://dx.doi.org/10.18235/0002321>
Policy Note 1. "Can Good Peers Hurt?: The Effect of Top Students on Girls' Educational Outcomes" was published in July 2021. <http://dx.doi.org/10.18235/0003565> Policy Note 2. "The effectiveness of homogeneous and of heterogeneous classrooms on student learning" was sent for publication in Jan 2023. EZSHARE-1680373482-69

Output Indicator	Indicator Detail	Unit Of Measure	Baseline	Baseline Year	Means Of Verification	Theme	Year	P	P(A)	A
1.3 Instruments designed	KPR	Instruments (#)				Education	Physical			
							2017	0		
							2018	1		1
							2019	0		2
							2020	1		1
							2021	1		1
							2022			5
							EOP 2022	3	0	10
							Financial			
							2017			
							2018			
							2019			
							2020			
							2021			
							2022			
							EOP 2022	7000	7000	7000

Advances In Execution: In 2018 we designed an instrument for class observations and a protocol for its deployment (EZSHARE-1680373482-16). We also designed and fine-tuned to the Mexican context an intervention (called Expande tu Mente) based on the Growth Mindset intervention designed at Stanford University. This intervention was implemented in 50 schools in Mexico City (EZSHARE-1680373482-5). In addition, in 2019 we designed several instruments for data collection including a new class observation protocol, a teacher survey, a student survey and a student standardized Math and Spanish test (see EZSHARE-1680373482-34, EZSHARE-1680373482-35, EZSHARE-1680373482-36, EZSHARE-1680373482-37, EZSHARE-1680373482-38, EZSHARE-1680373482-39, EZSHARE-1680373482-40, EZSHARE-1680373482-41, EZSHARE-1680373482-42). No other instruments were designed in 2020, 2021, or 2022.

Output Indicator	Indicator Detail	Unit Of Measure	Baseline	Baseline Year	Means Of Verification	Theme	Year	P	P(A)	A
1.4 ^s New databases created	Other (KPR)	Databases (#)				Social Development	Physical			
							2017	0		
							2018	2		1
							2019	2		3
							2020	1		1
							2021	1		1
							2022			0
							EOP 2022	6	0	6
							Financial			
							2017			
							2018			
							2019			
							2020			
							2021			
							2022			
							EOP 2022	138000	138000	117339

Advances In Execution: In 2019 we administered surveys to measure student learning and classroom behaviors as well as class observations to measure teacher practices in 150 schools in Mexico City (see for instance, EZSHARE-1680373482-9, EZSHARE-1680373482-51, EZSHARE-1680373482-52, EZSHARE-1680373482-53). No other data was collected in 2020, 2021, or 2022.

2. Improving learning by changing the market of teachers

Component Cost: \$200,000

Output Indicator	Indicator Detail	Unit Of Measure	Baseline	Baseline Year	Means Of Verification	Theme	Year	P	P(A)	A
2.1 ^s Working Papers prepared	Other (KPR)	Papers (#)				Social Development	Physical			
							2017	0		
							2018	0		0
							2019	1		1
							2020	1		
							2021	1		1
							2022			3
							EOP 2022	3	0	5
							Financial			
							2017			
							2018			
							2019			
							2020			
							2021			
							2022			
							EOP 2022	55000	55000	62582

Advances In Execution: Paper 4. We published one IDB working paper in 2020 IDB-WP-01089 "Unbundling Returns to Degrees and Skills: Evidence from Postsecondary Education in Colombia". EZSHARE-1680373482-30. <http://dx.doi.org/10.18235/0002121> Paper 5. IDB-WP-01089 opened the opportunity to study an interesting policy implemented by the Ministry of Education in Colombia that awards a distinction to the best students who graduate from tertiary education. We collected the information of all the awardees and merge it with the data from the previous paper. We then use a regression discontinuity design to study how much do wages of the winners increase due to the award. This paper was not included in the TC proposal , but it is an indirect result of it. An unpublished version of it can be found in EZSHARE-1680373482-76 Paper 6. In 2019 using the data collected in Peru we published the discussion paper "Civil Service Reform and Self-Selection into Teaching: Experimental Evidence from an Information Intervention". <http://dx.doi.org/10.18235/0001832>. The new version of this paper has been submitted for publication as an IDB Working paper IDB-WP-01438. EZSHARE-1680373482-72. Paper 7. We are working on a paper to analyze the effect of teacher allocations to schools in Colombia. This paper has been delayed due to administrative data availability (which we could not access due to the covid-19 crisis which severely affected the responsiveness of government officials). We have received new data and a first draft of the main results. An unpublished version of it can be found in EZSHARE-1680373482-74. Paper 8. A working paper partly funded by the ESW RG-K1416 (80%) and partly funded by this TC was published as "Improving Early Literacy through Teacher Professional Development: Experimental Evidence from Colombia" <http://dx.doi.org/10.18235/0004514>

Output Indicator	Indicator Detail	Unit Of Measure	Baseline	Baseline Year	Means Of Verification	Theme	Year	P	P(A)	A
2.2 ^s Technical notes created	Other (KPR)	Notes (#)				Social Development	Physical			
							2017	0		
							2018	0		0
							2019	1		1
							2020	0		
							2021	1		1
							2022			0
							EOP 2022	2	0	2
							Financial			
							2017			
							2018			
							2019			
							2020			
							2021			
							2022			
							EOP 2022	50000	50000	44305

Advances In Execution: Technical Note 2. This note was published as an IDB Discussion Paper, IDB-DP-744 Lessons for Latin America from Comparative Education: South Korea’s Teacher Policy in April 2020. EZSHARE-1680373482-57 <http://dx.doi.org/10.18235/0002322> Policy Note 3. We wrote a policy note per request of the Colombian Ministry of Education "Desagregando los Retornos a las Habilidades: Evidencias de la Educación Superior en Colombia" (EZSHARE-1680373482-44) Policy Note 4. We wrote a second policy notes per request of the Colombian Ministry of Education "Esquemas de selección y resultados futuros: Los efectos de la selección de mejores maestros sobre la calidad de los maestros y el aprendizaje de los estudiantes" (EZSHARE-1680373482-45) These policy notes were presented in seminars at the Ministry of Education.

Output Indicator	Indicator Detail	Unit Of Measure	Baseline	Baseline Year	Means Of Verification	Theme	Year	P	P(A)	A
2.3 ^s New financial instruments developed	Other (KPR)	Instruments (#)				Social Development	Physical			
							2017	0		
							2018	1		1
							2019	0		1
							2020	0		
							2021	1		1
							2022			0
							EOP 2022	2	0	3
							Financial			
							2017			
							2018			
							2019			
							2020			
							2021			
							2022			
							EOP 2022	3500	3500	3500

Advances In Execution: Instrument 1. As part of the Information Exchange Agreement 1465 of 2017 with the Ministry of Education of Colombia (MEN), the Inter-American Development Bank (IDB) cleaned and merged at the person level the information managed from the Sector Development Subdirectorate of the MEN. The databases made available by the Ministry were: Saber 11, Spadies, Saber Pro, Ole, Annex 3A, Annex 31 and Concursos Docentes. See EZSHARE-1680373482-46. Instrument 2. In 2018 we developed an instrument to measure the effect of an information intervention aimed at attracting highly motivated students to the teacher career in Peru. The survey questionnaire can be found in EZSHARE-1680373482-12. Instrument 3. As part of the TC component 2, in order to provide evidence-based policy recommendations to improve teacher selection, development and quality, we partnered with the Ministry of Education of Manizales in Colombia and Fundacion Luker to further extend the analysis in this component. We implemented a low-cost RCT to provide 1st grade teachers with professional development. The goal was to study its effectiveness on teachers and students who were allocated to small low-income (mostly rural) schools. We hired Fundacion Luker who was already working in the field to do the data collection and start the project. However, a few weeks after we had started the COVID-19 pandemic unfolded and the field work got suspended until further notice. Schools re-opened in 2021 and we were able to collect information about students' performance. No instrument was developed in 2022.

Output Indicator	Indicator Detail	Unit Of Measure	Baseline	Baseline Year	Means Of Verification	Theme	Year	P	P(A)	A
2.4 ^s New databases created	Other (KPR)	Databases (#)				Social Development	Physical			
							2017	0		
							2018	1		1
							2019	0		1
							2020	0		
							2021	1		1
							2022			0
							EOP 2022	2	0	3
							Financial			
							2017			
							2018			
							2019			
							2020			
							2021			
							2022			
							EOP 2022	91500	91500	62899.84

Advances In Execution: Dataset 1. A dataset was produced in the Ministry of Education of Colombia with confidential data. For that reason, we cannot publish it. Dataset 2. Dataset on 2015 students which we followed up in 2018 to understand their career choices and measure the impact of a RCT designed to encourage good students to become teachers (See EZSHARE-1680373482-10 and EZSHARE-1680373482-50) Dataset 3. Dataset of student’s EGRA and EGMA scores in Manizales Colombia 2021. EZSHARE-1680373482-77 No data was collected in 2022.

3. Improving learning by reallocating school resources in Peru

Component Cost: \$80,000

Output Indicator	Indicator Detail	Unit Of Measure	Baseline	Baseline Year	Means Of Verification	Theme	Year	P	P(A)	A
3.1 ^s Project proposal developed	Other (KPR)	Proposals (#)				Social Development	Physical			
							2017	0		
							2018	0		1
							2019	1		0
							2020	0		
							2021	0		0
							2022			0
							EOP 2022	1	0	1
							Financial			
							2017			
							2018			
							2019			
							2020			
							2021			
							2022			
							EOP 2022		15000	20000

Advances In Execution: In 2018, we hired a consultant from a research center in Peru to summarize literature, analyze options, consult experts, and create an initial protocol for interventions. Cost-effective school-level interventions were identified, and we are currently piloting two of the most promising ones, named "Conecta Ideas," "Monitoreo de Aprendizaje," "SMS for parents," and "Expande tu Mente." These interventions were piloted in two schools. In 2019, the government agreed to expand the intervention and evaluate it through a RCT. See EZSHARE-1680373482-11. This activity was finalized in 2018. No activity was performed in 2019-2022.

Output Indicator	Indicator Detail	Unit Of Measure	Baseline	Baseline Year	Means Of Verification	Theme	Year	P	P(A)	A
3.3 ^s New databases created	Other (KPR)	Databases (#)				Social Development	Physical			
							2017	0		
							2018	0		1
							2019	1		0
							2020	0		
							2021	0		0
							2022			0
							EOP 2022	1	0	1
							Financial			
							2017			
							2018			
							2019			
							2020			
							2021			
							2022			
							EOP 2022	80000	30000	40000

Output Indicator	Indicator Detail	Unit Of Measure	Baseline	Baseline Year	Means Of Verification	Theme	Year	P	P(A)	A
4.1 Websites that incorporates instruments, intervention materials, and data from the experiments implemented	KPR	Websites developed#				Education	Physical			
							2017	0		
							2018	0		0
							2019	0		0
							2020	1		
							2021	0		0
							2022			1
							EOP 2022	1	0	1
							Financial			
							2017			
							2018			
							2019			
							2020			
							2021			
							2022			
							EOP 2022	20000	20000	30000

Advances In Execution: This TC produced rigorous evidence to guide public policy in education and, more generally, in skills development in the region. As a way to promote the use of evidence in policymaking and to disseminate some of the results of this TC, we developed a website to cure and organize the available evidence. The website was conceptualized as tackling the different skill-development challenges faced throughout the lifetime of individuals. For that reason, we performed a series of meta-analysis covering skill development along the life cycle. Website 1. We finalized the development of the website SkillsBank. It is temporarily hosted: <https://test-skillsbank20.pantheonsite.io/en> and <https://test-skillsbank20.pantheonsite.io/es>). The website properly reflects the contribution of the Korean Fund. Technical note 3. "SkillsBank Methodology Note. Primary Learning, Early Childhood and Secondary Enrollment, Completion and Learning Methodology" (EZSHARE-1680373482-60) Technical note 4. "SkillsBank Methodology Note. Adult Training Methodology" (EZSHARE-1680373482-62) <http://dx.doi.org/10.18235/0004472> Technical note 5. "SkillsBank Methodology Note. Managers Training" (EZSHARE-1680373482-65) <http://dx.doi.org/10.18235/0004478>

Output Indicator	Indicator Detail	Unit Of Measure	Baseline	Baseline Year	Means Of Verification	Theme	Year	P	P(A)	A
4.2 ^s Regional meetings for project preparation attended	Other (KPR)	Meetings (#)				Action Plan C&D Project Preparation	Physical			
							2017	0		
							2018	1		1
							2019	2		2
							2020	0		
							2021	0		0
							2022			0
							EOP 2022	3	0	3
							Financial			
							2017			
							2018			
							2019			
							2020			
							2021			
							2022			
							EOP 2022	22500	22500	22500

Advances In Execution: Throughout the years, we gave several presentations in the Ministries of education in Colombia, Peru, and Mexico. The results of the first component of the TC were presented to the Administración Federal de Servicios Educativos en el Distrito Federal of the Secretaria de Educación Pública de Mexico in January of 2019. We also submitted intermediate reports with findings and recommendations in November of 2018. Some of the results of the second component of the TC were presented in November and December of 2018 in 4 training sessions organized with the Dirección Sectorial de Educación Superior del Ministerio de Educación Nacional de Colombia and through a presentation to the advisors of the vice-minister of primary, secondary and middle education.

Output Indicator	Indicator Detail	Unit Of Measure	Baseline	Baseline Year	Means Of Verification	Theme	Year	P	P(A)	A
4.3 ^s Seminars organized	Other (KPR)	Seminars (#)				Social Development	Physical			
							2017	0		
							2018	1		1
							2019	2		2
							2020	0		
							2021	0		0
							2022			0
							EOP 2022	3	0	3
							Financial			
							2017			
							2018			
							2019			
							2020			
							2021			
							2022			
							EOP 2022	22500	22500	22500

Advances In Execution: Throughout the years we presented most of the papers in IDB seminars, academic conferences, and in external seminars. We have presented the results of the papers produced by the project in several academic conferences and seminars including: Society of Labor Economists Meeting of 2022, the North East Universities Development Consortium (NEUDC) 2022, Latin American and Caribbean Economic Association Conference of 2022, Universidad EAFIT 2021, Banco de la República de Colombia 2021, University of Bologna 2021, RIDGE Forum 2020, RIDGE Forum 2021, European University Institute 2021, UNU-WIDER 2018, Universidad Carlos III 2018, Pontificia Universidad Católica de Chile 2018. Some of these presentations can be found in EZSHARE-1680373482-47, EZSHARE-1680373482-48, EZSHARE-1680373482-49, EZSHARE-1680373482-18. As part of the work in the TC, with the goal of bringing expertise from South Korea to the IDB and the region, we invited a researcher (Dr. Soohyung Lee, from Seoul National University) who collaborated with the Research Department in this project. Beyond some of the technical notes listed above, some of her output can be found in EZSHARE-1680373482-24 and EZSHARE-1680373482-25.