

CONFIDENTIAL  
INTERNAL USE  
PUBLIC UPON APPROVAL

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK  
MULTILATERAL INVESTMENT FUND

**CHILE**

**SOCIAL ENTERPRISE FOR INNOVATIVE MATH INSTRUCTION**

**(CH-T1180)**

**DONORS MEMORANDUM**

This document was prepared by the project team consisting of María Elena Nawar (MIF/KEC), Carolina Carrasco (MIF/CCH), Project Team Co-leaders; Oscar Farfán (MIF/CFO); Evelyn López (MIF/CCH); Paola D. Zorrilla (MIF/KEC); Emma Naslund-Hadley (SCL/EDU); and George Rogers (GCL/GCL).

This document contains confidential information relating to one or more of the ten exceptions of the Access to Information Policy and will be initially treated as confidential and made available only to a restricted group of individuals within the Bank. The document will be disclosed and made available to the public upon approval.

## CONTENTS

I.	PROBLEM TO BE ADDRESSED .....	1
	A. Description of the problem.....	1
	B. Causes of the problem.....	2
	C. Beneficiaries.....	3
II.	THE INNOVATION PROPOSAL .....	3
	A. Description of the project.....	3
	B. Results, measurement, and monitoring and evaluation of the project .....	5
III.	ALIGNMENT WITH THE IDB GROUP, SCALABILITY, AND PROJECT RISKS .....	6
	A. Alignment with the IDB Group.....	6
	B. Scalability .....	6
	C. Project and institutional risks .....	7
IV.	FINANCIAL INSTRUMENT AND PROPOSED BUDGET .....	8
V.	EXECUTING AGENCY AND IMPLEMENTATION STRUCTURE .....	9
	A. Description of the executing agency .....	9
	B. Implementation mechanism and structure .....	10
VI.	ATTAINMENT OF MILESTONES AND SPECIAL FIDUCIARY ARRANGEMENTS .....	10
VII.	ACCESS TO INFORMATION AND INTELLECTUAL PROPERTY .....	11

**PROJECT SUMMARY**  
**SOCIAL ENTERPRISE FOR INNOVATIVE MATH INSTRUCTION**  
**(CH-T1180)**

Student performance on mathematics tests is cause for concern in Latin America and the Caribbean. Fifty-two percent (52%) of 15-year-old Chilean students do not have the minimum math skills required to face the challenges of life in modern society (compared to an average of 18% in OECD countries).<sup>1</sup> And only 2% of Chilean students have the mathematical foundations needed to be able to continue STEM studies (science, technology, engineering, and mathematics). The lack of such foundations negatively affects and will continue to affect STEM instruction and the associated sectors, which are essential for fueling the knowledge-based economy and innovation and the advances that will be essential to the country's social and economic development in the coming years and decades.

There is a particularly striking gap in the acquisition of basic math skills among children in vulnerable and poor segments of society, and among girls in general. The math skills of boys and girls in the region are the same up until third grade. But starting in fourth grade, a gap begins to open between boys and girls and never again closes. Chile has one of the widest gender gaps in the world in mathematics.<sup>2</sup> This reality presents insurmountable barriers to women interested in STEM studies, which perpetuates inequality of opportunities in the labor market and, by excluding 50% of the population, limits the development of innovation and economic growth.

The proposed project seeks to address these challenges and relatively quickly solve the problem of poor math performance and inequality experienced by low-income students. Accordingly, the project's objective is to improve the acquisition of math skills in basic education accessible to students in all socioeconomic levels in Chile. The method to be tested, which was developed by the nongovernmental organization JUMP Math<sup>3</sup> Canada, has proven to produce strong results and demonstrated that all students, regardless of socioeconomic background, can master the concepts and acquire skills in this area. The methodology addresses math learning deficits through dynamic participatory processes based on guided discovery learning, ongoing assessments, and lessons divided into small, easily understandable step-by-step units. If the pilot stage of this project is successful, the plan is to scale it up nationwide so that all Chilean students can improve their math skills, which will prepare more students to step into jobs in the knowledge-based economy and/or pursue STEM careers in the future.

The proposed project seeks to support the social enterprise Innovaciones Educativas (UpSocial), the executing agency, to promote a scalable solution oriented to the education market that will help Chilean teachers gain access to the JUMP Math methodology, a tool with a proven track record in Canada, Spain, and the United States, in order to improve the math skills of Chilean students. The project is especially targeted to students from families in low socioeconomic groups, in order to demonstrate that all boys and girls can achieve math proficiency regardless of their socioeconomic background.

---

<sup>1</sup> OECD, 2013.

<sup>2</sup> OECD (2013). PISA 2012. Vol.1 Table 12.3a.

<sup>3</sup> JUMP is the acronym for Junior Undiscovered Math Prodigies.

## **ANNEXES**

Annex I	Results Matrix
Annex II	Summary Budget

## **APPENDICES**

Proposed resolution

## **INFORMATION AVAILABLE IN THE TECHNICAL DOCUMENTS SECTION OF THE MIF'S PROJECT INFORMATION SYSTEM**

Annex III	Itemized budget
Annex IV	Terms and conditions sheet
Annex V	Diagnostic needs assessment of the executing agency
Annex VI	Project status reports and attainment of milestones and fiduciary agreements
Annex VII	Procurement plan

## **ABBREVIATIONS**

MIF	Multilateral Investment Fund
OECD	Organization for Economic Cooperation and Development
PISA	Program for International Student Assessment
SIMCE	Sistema Nacional de Evaluación de Aprendizaje de Estudiantes [National Student Learning Assessment System]
STEM	Science, technology, engineering, and mathematics

**SOCIAL ENTERPRISE FOR INNOVATIVE MATH INSTRUCTION  
(CH T1180)**

<b>Country and geographic location:</b>	Chile. The project will be implemented in Santiago, Chile, in the municipios of Cerro Navia, La Pintana, Santiago, Recoleta, Renca, and others to be identified during project execution.		
<b>Executing agency:</b>	Innovaciones Educativas UpSocial, S.L. (UpSocial), a social enterprise		
<b>Focus area:</b>	Knowledge-based economy. Specifically, the project is consistent with the line of work that provides support to educational technology firms in order to incentivize the use of technology to improve education.		
<b>Coordination with other donors/Bank operations:</b>	Fundación Telefónica, Acción Empresas, and Chile's Ministry of Education.		
<b>Project beneficiaries:</b>	The project will directly benefit 3,300 third- to fifth-grade students and 125 mathematics teachers in approximately 25 public or subsidized schools <sup>4</sup> in low-income areas.		
<b>Financing:</b>	Technical cooperation (nonreimbursable):	US\$200,000	13%
	Technical cooperation (contingent recovery):	US\$551,000	37%
	Investment:	US\$000,000	
	Loan:	US\$000,000	
	Other (explain):	US\$000,000	
	<b>Total MIF contribution:</b>	US\$000,000	
	Counterpart:	US\$752,154	50%
	Cofinancing (if any; include a separate line for IDB cofinancing, if applicable)		
	<b>Total project budget:</b>	US\$1,503,154	100%
<b>Execution and disbursement timetable:</b>	Execution period: 60 months Disbursement period: 60 months		

<sup>4</sup> Public schools (44% of schools) are owned and run by the municipios. Subsidized private schools (50% of schools) receive government funding, are run by private parties, may have shared financing, and until 2016 may operate at a profit. A subsidized education reform is currently being implemented that eliminates profit-making at all schools that receive State support. There are also private-paid tuition schools (5% of schools), which are 100% privately funded and run.

<b>Special contractual conditions:</b>	<p>Conditions precedent to the first disbursement will be: (i) selection of the project coordinator; and (ii) presentation of the first annual work plan.</p> <p>For the US\$551,000 MIF contribution, the early innovation recoverable funding instrument<sup>5</sup> will be used, in the form of a contingent recovery technical cooperation operation. Under these arrangements, the enterprise UpSocial, S.L., will be required to repay the amount of the instrument only if the initiative is successful and a minimum level of commercial viability is achieved. A discount mechanism for commercial and social performance will be implemented as an incentive, whereby the executing agency will receive a discount of 25% on the US\$551,000 if it repays on time and the students participating in the pilot stage achieve certain levels of academic performance. The details of this arrangement will be set out in Annex IV in the technical files.</p>
<b>Environmental and social impact review:</b>	<p>This operation has been screened and classified in accordance with the requirements set out in the Bank's Environment and Safeguards Compliance Policy (OP-703) of 24 October 2016. Given that impacts and risks are limited, the project has been proposed as a category "C" operation.</p>
<b>Unit responsible for disbursements</b>	<p>Country Office in Chile (COF/CCH).</p>

---

<sup>5</sup> This instrument is part of the expanded toolkit of MIF products presented to the Donors Committee (document MIF/GN-209-3).

## I. PROBLEM TO BE ADDRESSED

### A. Description of the problem

- 1.1 International evidence shows that the quality of education, as measured by learning outcomes on international tests, is the factor that best explains the positive relationship between education and the economic development of countries, and it is also related to better job placement in the labor market and higher incomes. It is the **quality** of education, not quantity, that can help close learning gaps among students from different socioeconomic and ethnic backgrounds.<sup>6</sup> The primary achievement of the Chilean school system in the last few decades has been the steady increase in education coverage. Ninety-four percent (94%) of the population between the ages of 5 and 14 is enrolled in the education system, and the graduation rate from secondary school is 83% (equivalent to the average in OECD countries).<sup>7</sup> In addition, significant progress has been made on gender issues: the historic gap in access to education has closed, and furthermore, system-wide, female students have a higher pass rate than their male counterparts.<sup>8</sup>
- 1.2 Despite the progress made in coverage and in closing the scholastic achievement gap among students from different socioeconomic sectors, there continue to be wide differences in access, and especially in the **quality** of the education received based on socioeconomic level. Therefore, quality and equity continue to be the biggest crosscutting challenges.
- 1.3 These challenges represent a barrier for any country that seeks a dynamic, modern economy that can compete effectively and create future high-quality jobs for its citizens. If the challenges related to quality and inequality are not addressed, they could cause cumulative socioeconomic setbacks for the most vulnerable populations. In particular, deficient math skills, which are increasingly considered a fundamental and indispensable basis for future employment, will impede the ability of countries in the region to effectively position themselves to create jobs in the knowledge-based economy.
- 1.4 Student performance on math tests is cause for concern in Latin America and the Caribbean. In Chile, one of every two Chilean students does not achieve minimum levels, according to data from the last Program for International Student Assessment (PISA) report, from 2012. Fifty-two percent (52%) of 15-year old Chilean students do not have the minimum math skills required to face the challenges of life in modern society (compared to an average of 18% in OECD countries).<sup>9</sup> And only 2% of Chilean students have the mathematical foundations needed to be able to continue STEM studies (science, technology, engineering, and mathematics). The lack of such foundations negatively affects and will continue to affect STEM instruction and the associated sectors, which are essential for fueling the knowledge-based economy and innovation and the advances that will be essential to the country's social and economic development in the coming years and decades.

---

<sup>6</sup> Inter-American Development Bank, Education Division. Education Sector Note 2014-2017 (document GN-2785).

<sup>7</sup> OECD, 2013.

<sup>8</sup> OECD, 2013.

<sup>9</sup> OECD, 2013.



- 1.5 There is a particularly striking gap in the acquisition of basic math skills among children in vulnerable and poor segments of society, and among girls in general. The math skills of boys and girls in the region are the same up until third grade. But starting in fourth grade, a gap begins to open between boys and girls and never again closes. Chile has one of the widest gender gaps in the world in mathematics.<sup>10</sup> This reality presents insurmountable barriers to women interested in STEM studies, which perpetuates inequality of opportunities in the labor market and, by excluding 50% of the population, limits the development of innovation and economic growth.

## B. Causes of the problem

- 1.6 In Chile, there are three types of schools at the primary and secondary level in the formal education system: public schools managed by the municipal governments, subsidized private schools, and private schools. Chile's education system has a high degree of segregation in which a student's socioeconomic level is closely related to the type of school he or she attends, with the most vulnerable students concentrated in the municipal public schools, lower-middle- and middle-income students in the subsidized schools, and high-income students in private-paid tuition schools. This distribution in and of itself would not present a problem if the academic performance of students in the subsidized and particularly the public schools did not demonstrate substantial deficiencies compared to students in private schools. Average math scores of fourth-grade students on the test administered by the National Student Learning Assessment System (SIMCE) in 2012 revealed gaps between the three types of schools and by gender.<sup>11</sup> Scores on the 2013 SIMCE test showed the same disparities except that math scores were even lower for the municipal (public) schools and especially the subsidized schools.<sup>12</sup>

**Average results of SIMCE, disaggregated by gender and administrative type of school**

Mathematics	Females	Males
Municipal	247	(+) 248
Subsidized private	264	(+) 267
Private-paid tuition	297	(+) 301

- 1.7 The following factors have been identified as contributing to the poor academic performance in math and the inequality experienced by students in municipal and subsidized private schools: (1) the low level of pedagogical knowledge of teachers, and (2) the distribution of teachers. In regard to the **pedagogical knowledge of teachers**, a primary consideration is that in Chile initial teacher training is provided by the universities in a decentralized manner. Because these universities have a great deal of freedom in developing their curricula, the programs are very dissimilar, although there is an accreditation process for teacher schools. Since 2008 there has been a voluntary exit examination for teachers, known as INICIA. INICIA scores for 2012 show a troubling reality regarding the skills of Chilean teachers. In the area of

<sup>10</sup> OECD (2013). PISA 2012. Vol.1 Table 12.3a.

<sup>11</sup> [Informe global de resultados por género de las distintas evaluaciones de logros de aprendizaje del año 2012.](#)

<sup>12</sup> [SIMCE 2013: Síntesis de Resultados.](#)

basic education, only 11% obtained a score of outstanding, while 55% obtained a score of acceptable, and 34% a score of insufficient. In addition, it is important to note that in general teachers face greater pedagogical difficulties with math and science than other subjects. In terms of the **distribution of teachers**, there is evidence that recent graduates with low scores on the INICIA exam who come from university programs that are not very selective are more likely to work in low socioeconomic schools with poorer academic performance.<sup>13</sup>

### C. Beneficiaries

- 1.8 The beneficiaries of the project will mainly be third- to fifth-grade students in municipal and subsidized private primary schools in the metropolitan region of Santiago. An equal (50/50) distribution of boys and girls will be sought to ensure gender balance. The project will also benefit approximately 125 teachers in about 25 schools that will receive a new math teaching methodology and the respective training to successfully teach the mathematics curriculum to their students. The schools will be selected from socioeconomically disadvantaged areas where there is a willingness to test an innovative methodology that could improve the academic performance of students.

## II. THE INNOVATION PROPOSAL

### A. Description of the project

- 2.1 The proposed project seeks to address the challenges mentioned above and relatively quickly solve the problem of poor math performance and inequality experienced by low-income students. Accordingly, the project's objective is to improve the acquisition of math skills in basic education accessible to students at all socioeconomic levels in Chile. If the pilot stage of this project is successful, the plan is to scale it up nationwide so that all Chilean students can improve their math skills, which will prepare more students to step into jobs in the knowledge-based economy and/or pursue STEM careers in the future.
- 2.2 **Proposed method.** JUMP Math<sup>14</sup> is a math instruction program covering kindergarten (5-year-olds) through the eight grades of basic education (from first to eighth grade). The methodology, which was developed by the nongovernment organization JUMP Math Canada, has been shown to generate strong results and has demonstrated that all students, regardless of socioeconomic background, can master the concepts and acquire skills in this area. The methodology uses proven procedures and resources, turning teachers into extraordinary math instructors regardless of their previous level of training, who can guide their students to achieve their maximum performance. The methodology addresses math learning deficits through dynamic participatory processes based on guided discovery learning, ongoing assessments, and lessons divided into small, easily understandable step-by-step units. JUMP Math has been rigorously evaluated through a series of impact studies that show significant short- and long-term improvements in the academic

---

<sup>13</sup> Valenzuela, J. P. and Sevilla, A. (2014). "La movilidad de los nuevos profesores chilenos en la década del 2000: un sistema escolar viviendo en peligro." In: *Docentes*, Cox, C., and Meckes, L., editors, CEPPE-Pontificia Universidad Católica. Pending publication.

<sup>14</sup> <http://www.jumpmath.org/>.

performance of students from all socioeconomic levels, and even more importantly, improvements in math and motivation skills.<sup>15</sup> Specifically, an impact evaluation conducted in 2011 by the University of Toronto found that students using the JUMP Math methodology acquired math skills at twice the rate of students in the control group.

- 2.3 The project will introduce high-technology elements such as digitization of materials, adaptive learning mechanisms, and gamification of a proven methodology. If the pilot initiatives planned as part of this project are successful, a social enterprise will be set up in Chile that will offer the JUMP Math methodology as well as advisory and support services to public schools in low-income areas, thereby raising the quality of math instruction at the national level. To this end, the project seeks to compare and determine if the outcomes obtained by JUMP Math in other countries (Canada, Spain, and the United States) are replicated in Chile. If the outcomes are favorable, investment capital from the MIF and other partners interested in establishing the social enterprise may be considered. Creating the enterprise will guarantee sustainability and scale for the proposed initiative. The project will focus on conducting a pilot initiative in 45 municipal and/or subsidized private schools in low-income areas of Santiago and nearby rural areas over a three-year period, in order to evaluate the program's implementation in Chile and determine the most appropriate model for generating income, ensuring the sustainability of the social enterprise, and reaching all schools in the country. The project expects to reach at least 3,300 third- to fifth-grade students. The project will also seek to ensure that the instruction focuses on girls in order to close the math skills gap between boys and girls, which influences the number of women who pursue STEM careers.
- 2.4 **Innovation.** This proposal has three innovative elements. The first is the use of technology to train teachers, along with the digital development of the methodology, adaptive learning, and gamification elements to make the methodology even more dynamic and interactive. The second is laying the groundwork for the creation of a social enterprise to ensure maximum dissemination of the methodology. This includes marketing elements in order to achieve sustainability and scale for the initiative. The third has to do with using a continuous improvement process to be able to frequently measure the results of the methodology and its effects on the instruction of teachers and students.
- 2.5 **Component I: Adaptation and implementation of the JUMP Math methodology.** The objective of this component is to prepare two pilot initiatives that will implement the JUMP Math methodology in roughly 25 schools to test whether it produces significant results that would justify expanding the methodology throughout the country. The purpose of the first pilot initiative, which is considered a pre-pilot operation, will be to test the methodology in five schools and adjust it as necessary. The second pilot initiative will include 20 additional schools, for a total of 25. As part of this component, the methodology will be adapted, since the Spanish version comes from Spain and the text must be localized for Chile (currency, geographic references, etc.) in order to facilitate instruction. The methodology will also be adjusted so that it is in alignment with the national curriculum standards issued by Chile's Ministry of Education. Approximately 125 teachers in the 25 schools will be trained. Meanwhile, under the pilot initiatives, math instruction will be offered over a

---

<sup>15</sup> <http://jumpmath.org/jump/en/research>.

- three-year period to 3,300 third- to fifth-grade students. These grades were selected because third grade is when greater discrepancies in performance levels start to be seen, making it the best time to redirect students so that they can improve their conceptual foundations and do not lose confidence in their abilities, which usually starts to happen in fourth grade. The SIMCE test will also be used as an assessment tool for the pilot operations. The SIMCE test, which has three parts (reading, math, and science), is administered to fourth-grade students nationwide.
- 2.6 **Component II: Sustainability and creation of the social enterprise.** The objective of this component is to rigorously measure the results of the pilot initiatives carried out in Component 1 and lay the groundwork for the creation of a social enterprise that could extensively distribute the methodology to more schools throughout the country. Qualitative and quantitative methodologies will be used in the evaluations, which will help determine not only if the changes in academic performance in mathematics can be attributed to JUMP Math but also know whether the boys and girls gain more self-confidence as they acquire more knowledge. The quasi-experimental evaluation will have a control group and two treatment groups: students who participate in JUMP Math with the use of technology tools (gamified version, see Component 3) and students who participate in JUMP Math without the use of technology tools. If the findings of the evaluation demonstrate that the pilot operations were successful in raising performance levels, full arrangements will be made to set up a social enterprise that will operate as the commercial distributor of the methodology in Chile.
- 2.7 **Component III: Technology platform: Digitization and gamification of the methodology.** The third component will seek to add a modern, differentiating element to the methodology. Although there is a basic existing teacher instruction platform, the JUMP Math methodology itself is not digitized. If it were digitized, it could be more dynamic and lower the publication costs of print versions, which means that distribution of the methodology could be expanded. This component also calls for a gamified prototype version that would make the methodology more interactive and enjoyable for students. The activities associated with this component consist in making the methodology accessible via Internet and smart devices so that children can practice at home. It also calls for the development of educational video games with virtual prizes and scores that use JUMP Math concepts and approaches to make math learning more dynamic.
- 2.8 **Component IV: Scaling: Extensive marketing of JUMP Math.** The objective of this component will be the mass marketing of the methodology through the Ministry of Education, so that it becomes part of the curriculum materials offered to municipal schools and especially subsidized private schools. Since a social enterprise is involved, the project is expected to establish lines of business for marketing the methodology to private schools, which would contribute to the organization's financial sustainability. To broaden the scope of this marketing, the methodology would need to be adapted to the different grades, i.e., from kindergarten to second grade, and from sixth to eighth grade. The sales team responsible for marketing and sales activities will also be financed.
- B. Results, measurement, and monitoring and evaluation of the project**
- 2.9 Over a three-year period, the project will help 3,300 students, at least half of whom will be girls, to acquire age-appropriate math skills. It will also provide support and

training for 125 teachers in the JUMP Math methodology. It calls for the creation of a social enterprise that could be the commercial distributor of the methodology, with plans for an agreement to be drawn up with the Ministry of Education and private schools to expand the methodology throughout the country.

- 2.10 UpSocial has a robust online system for monitoring teachers and their students, which is able to measure learning progress on an ongoing basis. The data that is collected will help gradually improve the teaching practices of instructors and will also identify areas for improving the adapted methodology. As mentioned earlier, the national SIMCE test will be used as a measurement tool as part of the rigorous quasi-experimental evaluation process, which will be supplemented by qualitative evaluations in order to measure changes in student motivational levels and teacher perceptions regarding the methodology. Both the quantitative and qualitative evaluations will carefully examine potential discrepancies between girls and boys in order to determine if the methodology is working effectively to close the knowledge acquisition gap between the two sexes. Finally, a case study will be conducted to document the pilot testing process, creation of the social enterprise, and scaling of this initiative.

### **III. ALIGNMENT WITH THE IDB GROUP, SCALABILITY, AND PROJECT RISKS**

#### **A. Alignment with the IDB Group**

- 3.1 The approach of the Bank's current country strategy with Chile<sup>16</sup> includes the human capital development intervention area. In recent years, progress has been made in terms of expanding school coverage, reducing gaps in school learning, and improving access to higher education. However, the challenge of education quality remains, as evidenced by deficiencies at all levels of education, inequalities based on socioeconomic level, and social segregation in the schools. The Bank is contributing to the development of a quality assurance system. In this respect, piloting new learning methodologies is particularly relevant. The MIF team has coordinated with the Education Division to scale up use of the methodology throughout the public sector.

#### **B. Scalability**

- 3.2 If JUMP Math is able to significantly improve skills and the enjoyment of math among low-income boys and particularly girls in Chile and strengthen the JUMP Math business model, the social enterprise will work to expand the methodology throughout Chile, as well as into Colombia, Guatemala, and Panama, with the support of institutions such as Fundación Telefónica and impact investment funds. The success of the pilot initiative in Spain and the strengthening of its revenue model is leading to very rapid growth of the program, which has been driven especially by demand from schools and teachers looking for innovative educational programs that are well packaged, successfully tested, and accessible to communities in lower socioeconomic levels.
- 3.3 Organizations such as Fundación Telefónica, Acción Empresas, and others have expressed interest in supporting this initiative because they are keenly aware of the need to improve math quality in the countries where they are located. The

---

<sup>16</sup> <http://www.iadb.org/en/countries/chile/country-strategy,1093.html> (document GN-2785).

organizations that have expressed interest in supporting this initiative recognize that low levels of academic performance are having and will continue to have a deleterious effect on the economy and their business activities if immediate action is not taken to correct the current course. The project can count on the cooperation of the Ministry of Education, on behalf of the government, to ensure that the methodology and standards are consistent with the national curriculum and to find ways to scale up the initiative to include public and private schools that receive government subsidies.

### **C. Project and institutional risks**

3.4 Issues that could negatively affect the implementation of project activities are as follows:

3.5 **The pilot initiatives do not achieve the expected results.** If the pilot operations do not result in significant improvements in the mathematics performance of the students who participate in them, the project will not be able to consider the creation of the social enterprise in Chile or the marketing of JUMP Math at the national level. To mitigate this risk, lessons learned from the experience in Spain have been taken into account. In the beginning, the project will only work with schools where there is a commitment and willingness by teachers and administrators to test the new methodology. The pilot initiatives will begin with third-grade students, since the national SIMCE test is administered to second, fourth, and eighth graders. By starting with third grade, no additional burden will be created by having to learn a new methodology in a year when the national test is administered, which also has financial implications for the schools.

3.6 **The Ministry of Education does not agree to purchase the methodology.** This may be the biggest risk to the project. Since the Ministry of Education determines the curriculum and teaching materials that the municipal and subsidized schools can select for their classrooms, the commercial success of the social enterprise is based on being able to reach an agreement with the Ministry of Education (provided the outcomes of the pilot operations are positive). To mitigate this risk, the project envisions two parallel courses of action: (i) discussions with the Ministry have begun to keep it updated about the project and collaborate on adapting JUMP Math to ensure that its content is consistent with the country's math curriculum standards. In addition, the rigorous evaluation of the method in the public school and the social commitment to make the program affordable for all schools will help ensure that the final product is in alignment with government requirements and that the government will be more willing to consider this teaching material for the schools; (ii) commercial activities will be pursued directly with the public and subsidized schools, which can independently choose to use innovative methodologies that meet the curricular requirements of the Ministry of Education, taking advantage of lines of public financing aimed at improving and strengthening school management.<sup>17</sup>

3.7 **Organizational risks.** Although UpSocial, S.L., has successfully implemented JUMP Math in Spain, raised funds from impact investors for national expansion, and has promising financial projections, the organization is still in a growth phase, which entails administrative and operational challenges. To mitigate this risk, the project includes institutional strengthening and capacity-building activities for the social

---

<sup>17</sup> Law 20550 and Law 20248 on Preferential School Subsidies.

enterprise in Chile, as well as ongoing strategic management of the project by UpSocial Spain and the MIF.

#### IV. FINANCIAL INSTRUMENT AND PROPOSED BUDGET

- 4.1 The total cost of the project is US\$1,503,154, of which US\$751,000 (50%) will be contributed by the MIF, and US\$752,154 (50%) will be contributed by the counterpart. The counterpart resources will be provided in full by the executing agency. Up to US\$200,000 of the MIF's contribution will be nonreimbursable. For the remaining US\$551,000 of the MIF's contribution, the early innovation recoverable funding instrument<sup>18</sup> will be used, in the form of a contingent recovery technical cooperation operation. Under these arrangements, the firm UpSocial, S.L., will be required to repay the amount of the instrument only if the initiative is successful and a minimum level of commercial viability is achieved. It was decided to use this combination of instruments in view of the legal status of the executing agency and the social and commercial nature of this initiative.
- 4.2 **Contingent recovery mechanism.** The amount of US\$551,000 will be considered traditional technical cooperation funding until UpSocial, S.L., a firm incorporated in Chile, reports cumulative revenues from the sale of the JUMP Math methodology that are greater than or equal to the minimum commercial viability level to be agreed upon with the company before project execution begins. When this amount is reached, UpSocial, S.L., will be required to reimburse the resources it received to the IDB/MIF. The repayment obligations may be acquired in stages as the company reaches the pre-established revenue milestones within the timeframe specified for the project.
- 4.3 **Discounts for commercial and social performance.** If UpSocial, S.L., Chile reaches the minimum commercial viability level and reimburses the IDB/MIF prior to the end of the execution period (60 months), the total value of the instrument will be discounted by 10% (so the repayment obligation will only be 90%). In addition, if the executing agency achieves an average 10% or higher improvement in the academic performance of students who participate in the pilot initiative compared with the control group, an additional 15% will be deducted from the obligation. Both discounts, which will be subject to timely repayment of the instrument and achievement of the abovementioned social impact target, may not exceed a maximum of 25% of the obligation and will be applied prior to repayment by the executing agency. Details of the financing terms and conditions can be found in Annex IV to this document.

---

<sup>18</sup> This instrument is part of the expanded toolkit of MIF products presented to the Donors Committee (document MIF/GN-209-3).

	MIF		Counterpart		Total
	Non-reimbursable	Contingent recovery	In cash	In kind	
Component 1: Adaptation and implementation of the JUMP Math methodology	0	147,888	120,188	0	268,076
Component 2: Sustainability and creation of the social enterprise	61,500	71,770	326,350	26,400	486,020
Component 3: Technology platform: Digitization and gamification of the methodology	80,202	23,998	15,000	0	119,200
Component 4: Scaling: Extensive marketing of JUMP Math	0	174,144	261,216	0	435,360
Project administration	0	133,200	0	0	133,200
Evaluations and promotion	28,000	0	0	3,000	31,000
Ex post reviews	15,000	0	0	0	15,000
Contingencies	15,298	0	0	0	15,298
<b>Subtotal</b>	<b>200,000 (13%)</b>	<b>551,000 (37%)</b>	<b>722,754 (48%)</b>	<b>29,400 (2%)</b>	
<b>Total</b>	<b>751,000</b>		<b>752,154</b>		<b>1,503,154</b>
<b>% of financing</b>	<b>50%</b>		<b>50%</b>		<b>100%</b>

## V. EXECUTING AGENCY AND IMPLEMENTATION STRUCTURE

### A. Description of the executing agency

- 5.1 Innovaciones Educativas UpSocial (UpSocial) will be the executing agency for this project and will sign the agreement with the Bank. UpSocial was created for the purpose of promoting educational innovations that improve the quality of education in Spain and the countries of Latin America by introducing proven innovations in those countries. Its mission states that its services specifically seek to improve the opportunities of the most vulnerable groups and individuals at risk of social exclusion. Given its social objective, any potential surplus revenues from its activities are limited to being distributed in the form of dividends to its owners. In accordance with its bylaws, a maximum of 30% of economic profits can be distributed, with the remaining 70% reinvested or applied to reserves.
- 5.2 JUMP Math is a Canadian nonprofit organization that has licensed its materials to the social enterprise UpSocial. In addition, the license agreement between JUMP Math and UpSocial states that if UpSocial changes its social mission (Articles 10.5.vii and 18.1.v), or if it were to run the company with the aim of maximizing its financial profits at the expense of limiting the impact and dissemination of the JUMP Math program (Article 18.3), JUMP Math would have the right to terminate the license.
- 5.3 UpSocial's commitment is to ensure that all families and schools have access to the JUMP Math program. To this end, schools in more complex, very low socioeconomic situations may purchase the program at a 65% discount over the retail price, which in fact is already the lowest on the market. In extreme cases, a 100% discount may be offered. UpSocial prioritizes its efforts to reach public schools first, which is why 76% of the schools that use the JUMP Math program in Spain are public. In the



framework of this project, a new organization will be legally constituted in Chile to distribute and market the JUMP Math methodology in Chile.

## **B. Implementation mechanism and structure**

- 5.4 UpSocial will set up an execution unit and the necessary structure to carry out the project activities and manage the project resources in an efficient and effective manner. UpSocial will also be responsible for submitting implementation status reports on the project. Details on the structure of the execution unit and status report requirements can be found in Annex V in the operation's technical files.
- 5.5 The JUMP Math program provides continuous evaluation and feedback tools to enable school teachers and administrators to propose improvements and adjustments on a regular basis. As in Spain, there are also mechanisms for ongoing assessment of students and early detection of challenges and errors in implementation, so that timely corrective action can be taken. The idea is to guarantee fidelity to the method and ongoing improvements and development to meet the needs of students and teachers. The execution unit in Chile will create an advisory council made up of representatives from the MIF and key participating agencies such as the Ministry of Education, municipal governments, teachers, social investors, etc., which will meet regularly to follow implementation of the pilot and propose corrective action when there are deviations.

## **VI. ATTAINMENT OF MILESTONES AND SPECIAL FIDUCIARY ARRANGEMENTS**

- 6.1 **Results-based disbursements and fiduciary arrangements.** The executing agency will agree to comply with the MIF's standard arrangements regarding results-based disbursements, the Bank's procurement policies,<sup>19</sup> and financial management guidelines<sup>20</sup> as specified in Annexes VI and VII. The disbursement period will be 60 months starting on the date the agreement is signed.
- 6.2 For the first tranche of US\$250,000:
- a. Designation of one or more people to represent the executing agency in all actions related to the execution of the agreement;
  - b. Evidence that the executing agency has designated a project coordinator and internal accountant;
  - c. Designation of a bank account at a financial institutional acceptable to the IDB/MIF;
  - d. Evidence that the executing agency has secured US\$100,000 for implementation of the pilot initiatives.
- 6.3 For the second tranche of US\$301,000:
- a. Delivery of agreements with either the Ministry of Education or public or subsidized schools for distribution of the methodology;
  - b. Other conditions to be defined in the terms and conditions sheet.

---

<sup>19</sup> See link: [Policies for the Procurement of Works and Goods Financed by the IDB](#).

<sup>20</sup> See link: [Operational Guidelines for Financial Management](#).

## **VII. ACCESS TO INFORMATION AND INTELLECTUAL PROPERTY**

- 7.1 **Intellectual property.** JUMP Math Canada owns the intellectual property rights to JUMP Math. The project will not finance the development of a new product but rather help to finance the scaling and expansion of JUMP Math. Therefore, the MIF has no intellectual property rights to the methodology. However, the MIF is free to disseminate and publish the results and impacts of the project and communicate its participation in financing the expansion of the methodology's distribution, in any media deemed appropriate.