

TC Document

I. Basic Information for TC

▪ Country/Region:	Brazil
▪ TC Name:	Using Behavioral Economics to Engage Parents and Improve Student Outcomes in Rio de Janeiro
▪ TC Number:	BR-T1384
▪ Team Leader/Members:	Gregory Elacqua, co-team leader, Emma Näslund-Hadley co-team leader, Rodolfo Scannone, Andrea Bergamaschi (SCL/EDU); Ximena Dueñas (CBR-EDU), Francisco Caldas de Andrade (IFD/ISC); Guillermo Eschoyez (LEG/SGO).
▪ Operational Support, Client Support, or Research & Dissemination	Client Support
▪ Date of TC Abstract authorization:	May 22, 2018
▪ Beneficiary (countries or entities which are the recipient of the technical assistance):	Municipality of Rio de Janeiro, through its Secretariat of Education (SME)
▪ Executing Agency and contact name (Organization or entity responsible for executing the TC Program):	IDB through SCL/EDU
▪ Donors providing funding:	Transparency Fund (AAF)
▪ IDB Funding Requested:	\$180,000.00
▪ Local counterpart funding, if any:	\$0.00
▪ Disbursement period (which includes Execution period):	24 months
▪ Required start date:	8/31/2018
▪ Types of consultants (firm or individual consultants):	Firms and Individuals
▪ Prepared by Unit:	SCL/EDU
▪ Unit of Disbursement Responsibility:	SCL/EDU
▪ TC Included in Country Strategy (y/n):	No
▪ TC included in CPD (y/n):	No
▪ Alignment to the Update to the Institutional Strategy 2010-2020:	Social inclusion and equality

II. Objectives and justification of the TC

- 2.1 Parent engagement and student attendance are strong predictors of academic success ([Fan & Williams, 2010](#); [Griffith, 2010](#); [Dubay & Holla, 2015](#)), and in particular during early years chronic absence prevents children from benefiting from programs designed to enhance their development ([Chang and Romero, 2008](#)). The [National Survey of School Health in Brazil \(2015\)](#) paints a picture of low parent engagement - 50% parents had checked their 9th grade child had completed their homework in the previous month and one in four parents was unaware if the child had missed school. According to administrative data from the Secretariat of Education in Rio de Janeiro (SME), children in preschools miss 11% of the school year on average, a number which is likely an underestimation since missing data for 2 to 5 year-olds is very high (up to 80% missing data). Moreover, 19% of the children who were enrolled in early childhood programs in 2017 either never attended the preschool, or completely stopped attending by the middle of the school year. High absenteeism in preschool is also highly inefficient for governments as early childhood spending is high, especially because in Rio a high proportion of early childhood programs are full-time. The city of Rio de Janeiro is going through a financial crisis and irregular attendance might lead to misuse of limited resources. As such the government of Rio de Janeiro is keen to address high absenteeism in its preschools school through the lens of raising awareness and improving parent engagement with schools.
- 2.2 There is scant research into the reasons for high absenteeism in Brazilian preschools, but international literature has shown that parents face cognitive barriers as well as logistical ones. [Ehrlich et al., \(2013\)](#) found that parental belief in the value of preschool attendance was correlated with lower absenteeism. Absence rates in Chicago Public Schools were lowest for children of parents who believed that preschool attendance matters as much as later years. Through a review of the literature into chronic absenteeism, [Henderson et al. \(2014\)](#) establish three types of reasons for absence, key amongst which is 'myths', which is to say the perceived unimportance of regular attendance. The sizeable drop in absenteeism when children pass from pre-k or kindergarten to primary school suggests that rather than the inability to get their child to school, parents do not view the pre-k years as equally important or instrumental in the future success of their child as those in primary school. This mentality may be compounded by the fact that compulsory education in Brazil only begins in primary school.
- 2.3 A plethora of recent literature demonstrates the effectiveness of information prompts in altering parent behavior, namely in affecting outcomes such as student attendance. One strand of the literature has achieved improvements in attendance through information nudges that alert parents to the total absences of their child, and how these compare to that of their peers ([Rogers & Feller, 2018](#); [Bergman, 2017](#); [Rogers et al., 2017](#)). [Rogers & Feller, \(2018\)](#) implemented an information campaign among parents from kindergarten to year 12 and reduced total absence by 6% and chronic absence by 10%, a result similar across all grades. [Bergman \(2017\)](#) provided weekly alerts by SMS to parents of middle schoolers on missed assignments and class absences which increased attendance by 17% and reduced course failure by 38%. These findings suggested that once made aware of the total number of absences of their child, parents place a higher marginal cost on each additional missed day

and undertake efforts to reduce absenteeism. Another strand of literature attempts to alter parental constructs and ultimately improve student attendance by sending parents SMS to build awareness of the importance of attendance and educational 'tips' such that they feel empowered to take actions to improve their child's outcomes ([Cunha et al., 2017](#)).

- 2.4 The literature has also shown that information nudges aimed at increasing parent engagement also influence students' success in school. Specifically, improved parental engagement through SMS has been found to improve student performance ([York and Loeb, 2014](#); [Kraft & Monti-Nussbaum, 2017](#)), but also increase parent attendance at school meetings ([Cunha et al, 2017](#); [York and Loeb, 2014](#); [Kraft and Dougherty, 2012](#); [Kraft & Monti-Nussbaum, 2017](#)).
- 2.5 This study attempts to improve parent engagement with their school and overcome cognitive scarcity and present bias which we posit impedes regular preschool attendance. The first treatment will be a pro-attendance nudge - weekly SMS to parents detailing the benefits of ECD. This nudge will attempt to alter parental constructs of their role and ability to enhance their child's outcomes by ensuring attendance at preschool, and thus securing the benefits that accrue from presence in class. The second treatment will be a pro-attendance nudge coupled with a parent engagement nudge. For example, parents will receive weekly SMS explaining the topics that will be covered in class that week, and succinctly but explicitly highlight the skills their child will fail to gain that week if they miss school days. Information about the child's school, their teachers and upcoming events, will also be texted to parents to promote transparency, competence and trust between the school and parents. These treatments will thus draw upon several nudge strategies; framing, loss aversion (losing the opportunity to learn specific topics), lessening the cognitive load by simplifying poignant information and making it easily accessible, altering parental constructs, and mitigating present bias.
- 2.6 Early education in Brazil consists of crèche for children aged 0-3 and preschool for 4-5-year-olds. Responsibilities for early education fall to the municipalities. In the Municipality of Rio de Janeiro, early childhood education is offered by 2,592 schools, out of which only 39 percent are public. According to the 2010 Census, only 34 percent of children aged 0-3 attended creches and 88 percent of children aged 4-5-year-old attended preschools in the Municipality of Rio de Janeiro.
- 2.7 Our main outcomes are changes in the level of parent engagement and attendance rates. We will conduct a parent survey before and after the intervention with questions that capture their level of engagement with their child's education. We will also collect absenteeism data in a random sample of preschools in Rio de Janeiro, as the information available from the Ministry includes very high levels of missing data for 2 to 5 year-olds. Finally, we will conduct focus groups with parents to better understand the reasons for low preschool attendance and any obstacles parents feel preclude them from engaging with the school.
- 2.8 The overall objective of the proposed TC is to develop a model for using behavioral economics to overcome the bottlenecks to parent engagement and corollary preschool attendance in the municipality of Rio de Janeiro. The specific objective is to test which type of informational nudge works best to engage parents.

- 2.9 This study will be conducted in close collaboration with the Secretariat of Education of the Municipality of Rio de Janeiro as it deals with sensitive and personal student details, and to promote sustainable and effective policy implementation.
- 2.10 **Strategic Alignment.** At an institutional level, the operation is aligned with the Bank's prioritization of learning and school attainment at the primary and secondary levels in the country Strategy with Brazil 2016-2018 (GN-2850). It is also aligned with the Strategy on Social Policy for Equity and Productivity (GN-2588-4), which highlights the importance of supportive family environment as a critical determinant of success throughout childhood. The operation is also aligned with the Updated Institutional Strategy 2010-2020 (AB-3008), which prioritizes social inclusion and equity. The operation is aligned and consistent with GN-2829-1, which guides financing of the Bank's Ordinary Capital Strategic Development Program for Social Development, including this operation. Given the proposed TC's focus on the identification of models for increasing parental insight into schools and their children's education through the provision of information and increased transparency, this TC is directly in line with the priorities of the Transparency Trust Fund (AAF), and particularly with the concept of "Targeted Transparency" which is one of the main guiding principles of the Fund. The TC is also aligned with the National Education Plan (PNE), which includes two goals specifically related to early education: the universalization of preschool by 2016, and the incorporation of 50% of zero to three year-olds in crèches by the year 2024. Although progress has been made in the last years, neither goal has been met. The TC is also aligned with the *Linha de Base Brasil* (BR-T1062), which financed a longitudinal study of outcomes in children aged 4 to 6 years in the Municipality of Rio de Janeiro.

III. Description of activities/components and budget

- 3.1 In line with its objectives, this operation consists of two components:
- 3.2 **Component I – Parent Engagement through information framing.** The TC will finance the design and implementation of two engagement campaigns to influence parent behavior. The first, a pro-attendance nudge, exploits the power of information framing techniques and mitigates the cognitive barriers parents face when choosing to take their child to preschool (present bias and cognitive load). Treatment 1 will use behavioral insights to frame and send weekly SMS to parents emphasizing the benefits of regular preschool attendance, and how parents can be agents in ensuring their child's success through ensuring their attendance. The second treatment, a pro-attendance nudge + parent engagement nudge, will highlight the benefits of ECD, for example, through the lens of a potential loss, and provide information about the school that promotes transparency and trust between the school and parents. Treatment 2 will involve weekly SMS explaining the topics to be covered in class that week, succinctly putting in easy-to-understand language the skills their child would not be acquiring if they miss school days that week. The SMS will also include information on the faculty, school events and other information to promote transparency and engagement with parents. The information campaign will be implemented through a school-level Randomized Control Trial (RCT) in the municipality of Rio de Janeiro. Prior to beginning the treatment, the team will undertake a series of focus groups with parents in preschools of Rio de Janeiro to better understand the reasons for preschool absenteeism and lack of engagement, and also a survey of preschool attendance through a random series of spot-checks in a representative sample of institutions. The focus groups will be analyzed to inform the content of the SMS campaigns, alongside input from behavioral economics and ECD experts. The team will meet

with the Secretary of education in July to review the administrative data available and concretize communication channels with them prior to the intervention beginning.

- 3.3 **Component II – Evaluation.** The resources from the TC will be used to finance the collection of baseline and endline data, as well as data cleaning and analysis. The RCT design will enable us to answer these research questions by calculating the average treatment effect. Student-level data provided by the Secretariat of Education will be used in both the baseline and endline analysis. The baseline will consist of a survey of preschool absenteeism, and a parent survey through which we measure current levels of engagement with the school, as well as perceptions of how approachable the teachers are, overall feelings of belonging to the school body, and the value parents place of preschool attendance. The endline will measure the change in baseline variables of parent engagement and student absenteeism. The school-level randomization will be stratified by income. With a sample of 400 schools and an average of 130 children per school, we will be able to detect an effect size of 0.1 standard deviation. The control group will receive the standard parent engagement activities the schools are accustomed to rolling out. The treatment groups will receive the interventions laid out in Component I.
- 3.4 **Component III: Dissemination of results.** This Technical Cooperation will generate evidence of the impact of behavioral nudges on influencing parents' attitudes towards child development programs, engagement with the school, and impact on preschool absenteeism. The TC will finance a dissemination event in Brazil to share the lesson learned and findings from the pilot. A report of the RCT results and analysis will be prepared. Because of the important public policy implications of Component 1, manuals of use will be written to ensure that the program has continuity, both in other Brazilian municipalities and in other countries in the region that look for cost-effective ways to boost early childhood education attendance rates.

IV. Indicative Budget

- 4.1 The total amount of this operation is US\$180,000 (non-reimbursable), to be financed with resources from the Transparency Fund (AAF) and disbursed over the course of 24 months.

		Costs		Total
Component and Activities	Expenditure Category	Year 1	Year 2	
Component 1: Parent Engagement through Transparency Pilot				\$80,000
Pilot Implementation: Behavioral economics expertise to define nudges in treatment 1 and 2 and advise on treatment details	Consultancy Firm	\$34,000	\$0	\$34,000
Pilot Implementation Support: Focus Groups and development of SMS content as gain-framing & loss framing	Consultant	\$46,000	\$0	\$46,000
Component 2. Evaluation				\$90,000
Baseline and endline data collection (including survey on preschool absenteeism in random institutions and focus groups)	Consultant	\$50,000	\$40,000	\$90,000
Component 3. Dissemination of results				\$10,000
Dissemination of results to stakeholders (conference) and RCT analysis report and instruction manual written	Consultants	\$0	\$10,000	\$10,000
TOTAL COST		\$130,000	\$50,000	\$180,000

V. Executing agency and execution structure

- 5.1 The project will be Bank executed as it requires specialized knowledge and implementation experience of behavioral economics and nudge theory, which the IDB is in a stronger position to provide than the Secretariat SME. A letter of non-objection has been attained from the Agencia Brasileira de Cooperação (ABC); and a letter of expression of interest has been attained by the municipality of Rio de Janeiro in Brazil, requesting that the Bank execute the TC.
- 5.2 Procurement of consulting and non-consulting services will be carried out in accordance with IDB's policies. Specifically, Section AM-650 of the Administrative Manual "Complementary Workforce" will be applied in the case of individual consultants; the Policy for the Selection and Contracting of Consulting Firms for Bank-executed Operational Work (GN-2765-1) and its Operational Guidelines (OP-1155-4) for hiring consulting services of intellectual nature and the Corporate Procurement Policy (GN-2303-20) for other services."

- 5.3 Resources from Component I will be used to directly contract MGov for the implementation of the treatment in groups II and III. MGov (<http://mgovbrasil.com.br/en/>) is the first and only firm in Brazil that is specialized in providing informational tools for social interventions. They also have specific packages that uses SMS to promote parent engagement in education. The direct selection of this firm is consistent with the Policy for the Selection and Contracting of Consulting Firms for Bank-executed Operational Work (GN-2765-1) which allows for single-source selection in cases: (i) where tasks represent a natural continuation of previous work carried out by the firm; (ii) when only one firm is qualified or has experience of exceptional worth for the assignment and it presents a clear advantage over competition; (iii) for small assignments where the contract's value is US\$100,000 or less; (iv) in emergency cases, such as in response to disasters and for consulting services required immediately following the disaster. The direct contracting of MGov complies with all criteria, except the emergency disaster criteria.

VI. Major Issues

- 6.1 Parent-level projects always raise specific challenges. This project is particularly ambitious in that we are providing a comparatively intangible treatment – information. This will require production of content that is easily understood by individuals with limited formal education, low levels of income and severe time constraint. The team is thoroughly conscious of these risks and will work with IDB education experts and local community members to ensure the content is culturally adapted to ease of understanding. Use of smartphones is ubiquitous in urban hubs, such as Rio de Janeiro. Moreover, the commitment of the municipality of Rio de Janeiro's team and secretary make the team confident that the proposed design is feasible, our government counterparts will ensure that the team has access to the most up-to-date parent contact information, and personally introduce the project to school directors in order to ensure the highest level of cooperation at all levels.

VII. Exceptions to Bank policy

- 7.1 There are no exceptions to Bank policies.

VIII. Environmental and Social Strategy

- 8.1 The TC is not anticipated to have direct environmental or social impacts and has been classified as "C" according to the Safeguard Classification tool (see [Safeguard Policy Filter Report](#) and [Safeguard Screening Form](#)).

Required Annexes:

- Annex I: [Letter of Request and Non-Objection](#)
- Annex II: [Results Matrix](#)
- Annex III: [Terms of Reference](#)
- Annex IV: [Procurement Plan](#)