

Hard Cash and Soft Skills: Experimental Evidence on Combining Scholarships and Mentoring in Argentina

Alejandro J. Ganimian (J-PAL/PEIE)

Felipe Barrera-Osorio (HGSE)

María Loreto Biehl (IDB)

María Cortelezzi (PEIE)

Daniela Valencia (Cimientos)

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- **Hypothesis**: Is it because low-income children and youth lack “soft” / “socio-emotional” / “character” skills to succeed in school?

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 - By 2012, **it only outperformed Peru**, which had scored two grade levels behind Argentina in 2000 (Ganimian 2013).

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- **Three-year impact evaluation**, of which the results from the first two years will be presented.

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 - Additionally, **parents are invited** to some mentoring sessions.

Program costs per year (2014)

Budget line	Cost per year (USD)	Cost per student (USD)	Share of total
Cash transfers	\$ 464,035	\$ 383	52%
Mentoring sessions	\$ 242,690	\$ 200	27%
Administration	\$ 63,593	\$ 52	7%
Supervision and monitoring	\$ 57,459	\$ 47	6%
Training of mentors	\$ 464,035	\$ 30	4%
Identifying/selecting students	\$ 24,083	\$ 20	3%
Total	\$ 888,008	\$ 733	100%

(1) Actual costs from running the program for 1,212 students in PBA in 2014.

(2) Exchange rate from December 2014, when data were collected.

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 - 204 students in the **treatment** group (PFE for six years)

Data collection timeline (2014-2016)

Month	Event	Participants	Location
May '14	Student survey Household survey	100% sample 100% sample	100% school 81% school 19% phone
Nov '14	<i>[Lottery was conducted]</i> Survey of socio-emotional skills	97% sample	80% school 17% home
Jan '15	Program data for 2014	100% treatment	
Jun '15	Survey of academic skills	88% sample	75% school 13% home
Oct '15	School performance data for 2014 Survey of socio-emotional skills Survey of "school navigation" skills	100% sample 90% sample 90% sample	66% school 24% home 66% school 24% home
Jan '16	Program data for 2015	94% treatment	
Jun '16	Survey of academic skills School performance data for 2015		
Oct '16	Survey of socio-emotional skills Survey of "school navigation" skills		

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 - ⑦ **Corrective flunking behavior**
 - (e.g., “I asked my teacher which topics will be covered in the exams”)
 - ⑧ **Preventive/corrective absenteeism behavior**
 - (e.g., “I caught up with reading done in class”)
 - ⑨ **Corrective free period behavior**
 - (e.g., “I took advantage of a free period to do homework”)

Balance on student variables at baseline (2014)

Variable	All	Control	Treatment	Diff	N
Argentine	.951 (.216)	.951 (.216)	.951 (.216)	0 (.026)	408
Female	.52 (.5)	.544 (.499)	.495 (.501)	-.049 (.051)	408
Age	12.435 (1.062)	12.502 (1.153)	12.368 (.961)	-.131 (.11)	407
Morning shift	.578 (.494)	.583 (.494)	.574 (.496)	-.008 (.045)	408
Repeated grade(s)	.309 (.463)	.322 (.468)	.297 (.458)	-.024 (.044)	404
Dropped out	.044 (.206)	.064 (.245)	.025 (.155)	-.039* (.02)	408

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Balance on household assets at baseline (2014)

Variable	All	Control	Treatment	Diff	N
Has car	.21 (.408)	.163 (.371)	.256 (.438)	.096*** (.026)	405
Has fridge	.72 (.449)	.677 (.469)	.764 (.426)	.087** (.028)	404
Has computer	.545 (.499)	.547 (.499)	.542 (.499)	-.002 (.026)	404
Has cell phone	.913 (.282)	.891 (.313)	.936 (.245)	.045 (.029)	404
Has Internet	.386 (.487)	.383 (.487)	.389 (.489)	.01 (.036)	404
Has natural gas	.298 (.458)	.269 (.444)	.327 (.47)	.064* (.034)	403
Has running water	.825 (.38)	.805 (.397)	.846 (.362)	.051 (.047)	401
Has solid floor	.985 (.122)	.98 (.141)	.99 (.1)	.01 (.007)	398
Homeowner	.627 (.484)	.605 (.49)	.648 (.479)	.043 (.035)	389

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Treatment dosage (2014 & 2015)

Variable	2014	2015
Scholarships received	7.51 (3.023)	7.817 (3.347)
Intended mentoring sessions	9.093 (1.025)	8.77 (2.902)
Actual sessions	7.819 (1.782)	7.487 (3.291)
Individual sessions	7.245 (1.912)	8.152 (2.723)
Group sessions	1.848 (1.503)	.618 (.707)
Number of mentors per student	1.191 (.394)	1.099 (.3)
Sessions rescheduled once	.216 (.509)	.466 (.905)
Sessions rescheduled twice	.025 (.155)	.094 (.343)
Sessions to which parent was invited	5.858 (2.259)	7.157 (2.56)
Sessions to which parent attended	5.49 (2.412)	4.738 (2.758)
Share of students suspended	.034 (.182)	.099 (.3)
Share of students expelled	.005 (.07)	.016 (.125)
N	204	191

Empirical strategy

- We estimate the **ITT effect** of the offer of a spot on the program (only two students who were offered a spot did not take it):

$$Y_{ij} = \alpha_j + \beta T_{ij} + \gamma X_{ij} + \epsilon_{ij} \quad (1)$$

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- β is the **coefficient** of interest.
- All estimations with standard errors accounting for **clustering at the school level**.

ITT effects on school performance (2014)

Variable	Control	Effect size	
Language - final grade	-.108 (1.088)	.213* (.108)	.161 (.104)
Math - final grade	-.058 (1.052)	.109 (.102)	.062 (.11)
Language - passed	.786 (.411)	.082** (.035)	.066* (.032)
Math - passed	.755 (.431)	.065 (.041)	.048 (.039)
Pending subjects	1.516 (2.511)	-.494** (.191)	-.375** (.157)
Absences	17.212 (18.926)	-2.989* (1.412)	-2.278* (1.162)
Failed	.148 (.356)	-.06** (.022)	-.046*** (.013)
Dropped out	.025 (.155)	-.01 (.012)	-.016 (.012)
Transferred	.054 (.227)	-.026 (.021)	-.017 (.019)
School FE?		Y	Y
Controls		N	Y

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ITT effects on socio-emotional skills (2014 & 2015)

Variable	2014			2015		
	Control	Effect size		Control	Effect size	
Self-beliefs about academics	-.021 (.969)	.04 (.099)	.022 (.087)	-.047 (.941)	.1 (.068)	.098 (.068)
Self-beliefs - Performance	.037 (.938)	-.072 (.133)	-.075 (.125)	-.069 (.974)	.14* (.071)	.159* (.076)
Self-beliefs - Self-efficacy	-.088 (1.016)	.17*** (.052)	.139** (.05)	-.01 (.989)	.028 (.103)	.008 (.093)
LASSI - Organization and planning	-.015 (.999)	.027 (.101)	.029 (.097)	-.013 (.94)	.028 (.074)	.025 (.061)
LASSI - Motivation	-.079 (1.02)	.156 (.131)	.121 (.142)	-.084 (.988)	.171** (.073)	.177* (.084)
GRIT-S	-.039 (.966)	.076 (.07)	.053 (.076)	-.059 (1.023)	.117 (.09)	.101 (.086)
GRIT-S - Consistency	.022 (.999)	-.044 (.086)	-.051 (.09)	-.011 (1.026)	.02 (.095)	.011 (.091)
GRIT-S - Perseverance	-.088 (.947)	.172* (.082)	.141 (.083)	-.083 (1.029)	.17* (.078)	.153 (.085)
DSIS (self-control)	-.052 (.986)	.098 (.097)	.12 (.094)	-.076 (1.071)	.142 (.082)	.144 (.082)
Labs (organization skills)	.009 (.982)	-.014 (.065)	-.079 (.068)	.057 (.978)	-.111 (.107)	-.155 (.107)
Smiley - Index of reflexivity	.006 (1.121)	-.01 (.092)	.01 (.08)	-.025 (1.006)	.044 (.082)	.102 (.083)
School FE?		Y	Y		Y	Y
Controls?		N	Y		N	Y

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ITT effects on school navigation skills (2015)

Variable	Control	Effect size	
Negative school habits	.019 (1.017)	-.032 (.103)	-.038 (.102)
Reaching out to others	.088 (1.029)	-.17* (.077)	-.213** (.087)
Proactive school behavior	-.062 (.99)	.114 (.16)	.048 (.14)
Preventive homework behavior	-.123 (.982)	.231* (.123)	.17 (.105)
Corrective homework behavior	-.109 (.989)	.203** (.08)	.167* (.081)
Preventive test behavior	-.11 (.984)	.206** (.069)	.142* (.064)
Corrective test behavior	-.116 (1.008)	.217** (.082)	.163 (.089)
Corrective failing behavior	-.138 (.989)	.261** (.083)	.201** (.085)
Corrective flunking behavior	-.064 (.986)	.119 (.086)	.069 (.091)
Preventive absenteeism behavior	-.095 (1.015)	.179 (.098)	.133 (.09)
Corrective absenteeism behavior	-.132 (.997)	.254** (.088)	.214** (.093)
Corrective free period behavior	-.133 (.971)	.254** (.097)	.226** (.099)
School FE?		Y	Y
Controls?		N	Y

ITT effects on academic skills (2015)

Variable	Control	Effect size	
Reading	.072 (.986)	-.129 (.084)	-.158 (.089)
Math	.005 (1.075)	.009 (.092)	-.046 (.092)
School FE?		Y	Y
Controls		N	Y

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TOT effects on school performance (2014)

Variable	No. of scholarships		No. of sessions	
Language - final grade	.025** (.010)	.021** (.010)	.024** (.010)	.021** (.010)
Math - final grade	.007 (.016)	.002 (.017)	.006 (.015)	.002 (.016)
Language - passed	.011** (.004)	.008** (.003)	.010** (.004)	.008** (.003)
Math - passed	.009* (.009)	.007 (.004)	.008* (.004)	.007 (.004)
Pending subjects	-.067*** (.022)	-.050*** (.015)	-.065** (.025)	-.049*** (.018)
Absences	-.339 (.271)	-.158 (.242)	-.326 (.271)	-.155 (.243)
Failed	-.008*** (.003)	-.006*** (.001)	-.008*** (.003)	-.006*** (.001)
Dropped out	-.003 (.002)	-.001 (.002)	-.003 (.002)	-.001 (.002)
Transferred	-.001 (.001)	-.002 (.001)	-.001 (.001)	-.002 (.001)
School FE?	N	N	N	N
Controls?	N	Y	N	Y

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TOT effects on school navigation skills (2015)

Variable	No. of scholarships		No. of sessions	
Negative school habits	-.004 (.012)	-.005 (.012)	-.004 (.012)	-.005 (.012)
Reaching out to others	-.022** (.009)	-.027*** (.009)	-.022** (.009)	-.028*** (.009)
Proactive school behavior	.015 (.019)	.005 (.017)	.016 (.019)	.005 (.017)
Preventive homework behavior	.031** (.014)	.023* (.012)	.032** (.015)	.024* (.012)
Corrective homework behavior	.027*** (.009)	.023** (.009)	.028*** (.009)	.023** (.009)
Preventive test behavior	.027*** (.008)	.019** (.008)	.028*** (.008)	.020** (.008)
Corrective test behavior	.029*** (.010)	.022* (.011)	.030*** (.010)	.023** (.011)
Corrective failing behavior	.034*** (.010)	.027** (.010)	.035*** (.010)	.028*** (.010)
Corrective flunking behavior	.016 (.010)	.010 (.011)	.016 (.010)	.010 (.011)
Preventive absenteeism behavior	.023** (.011)	.018 (.011)	.024** (.011)	.019 (.012)
Corrective absenteeism behavior	.033*** (.009)	.029** (.011)	.034*** (.010)	.030** (.011)
Corrective free period behavior	.033*** (.010)	.030** (.011)	.034*** (.011)	.031** (.012)
School FE/Controls?	N/N	N/Y	N/N	N/Y

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 - Some evidence of heterogeneous effects on socio-emotional skills.

Heterogeneous effects

Heterogeneity of ITT effects on socio-emotional skills, by SES (2014 & 2015)

Variable	2014				2015			
	PFE	Poor	x Poor	N	PFE	Poor	x Poor	N
Self-beliefs about academics	-.446 (1.060)	-.204 (1.263)	2.754 (1.839)	395	.287 (1.069)	-.109 (1.273)	1.722 (1.869)	366
Self-beliefs - Performance	-1.313* (.705)	-.590 (.840)	2.961** (1.223)	395	.305 (.625)	.333 (.744)	1.447 (1.093)	366
Self-beliefs - Self-efficacy	.866 (.550)	.386 (.655)	-.207 (.954)	395	-.018 (.695)	-.442 (.827)	.275 (1.214)	366
LASSI - Organization and planning	-.638 (.647)	-.132 (.771)	2.774** (1.123)	395	-.776 (.720)	-.490 (.857)	3.166** (1.259)	366
LASSI - Motivation	.112 (.325)	-.405 (.387)	.895 (.564)	395	.295 (.336)	.164 (.400)	.579 (.588)	366
GRIT-S	-.233 (.609)	-.157 (.726)	2.106** (1.057)	395	-.135 (.644)	-.666 (.767)	2.337** (1.126)	366
GRIT-S - Consistency	-.425 (.403)	-.248 (.480)	.916 (.700)	395	-.112 (.423)	-.041 (.504)	.658 (.740)	366
GRIT-S - Perseverance	.191 (.371)	.091 (.442)	1.189* (.644)	395	-.022 (.395)	-.624 (.470)	1.679** (.691)	366
DSIS (self-control)	.548 (.794)	1.266 (.946)	.861 (1.378)	395	.182 (.849)	-.625 (1.011)	2.675* (1.485)	366
Labs (organization skills)	-.064 (.526)	-.667 (.626)	-.281 (.912)	395	-.804 (.537)	-.838 (.639)	.884 (.939)	366
Smileys - Index of reflexivity	.027 (.030)	.068* (.035)	-.082 (.052)	395	.012 (.060)	.131* (.071)	.090 (.105)	366
School FE/Controls?		Y/N				Y/Y		

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Take-aways

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 - **Heterogeneous effects** suggests:
 - **Average** student: ↑ school performance, ↑ school navigation skills
 - **Low-income** students: ↑ socio-emotional skills

Many thanks

E-mail: aganimian@povertyactionlab.org

Website: http://scholar.harvard.edu/alejandro_ganimian