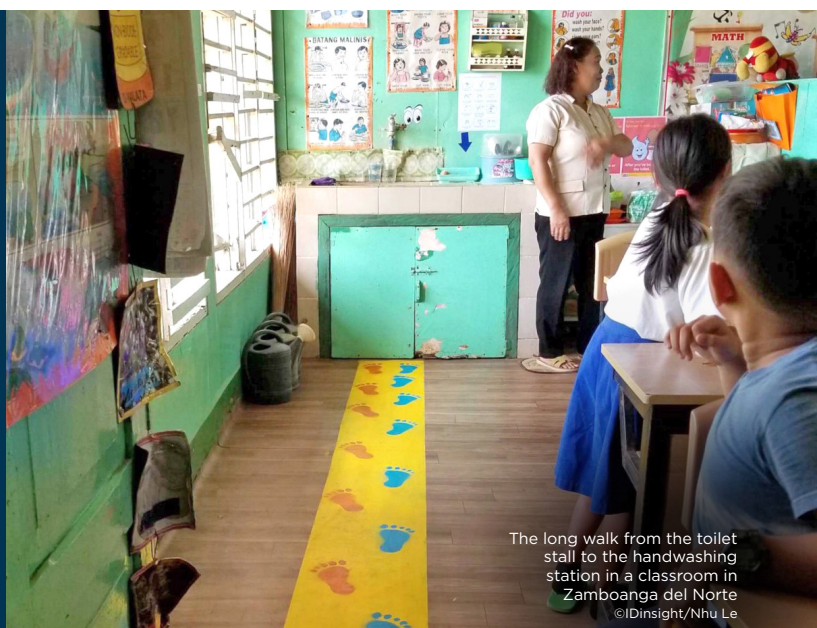


Encouraging Handwashing In Schools Through Behavioral Nudges



The long walk from the toilet stall to the handwashing station in a classroom in Zamboanga del Norte
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SUMMARY

- Handwashing with soap is one of most effective ways to combat the spread of a variety of diseases, including COVID-19. Building handwashing habits among schoolchildren is critical to ensuring schools remain safe learning spaces. However, previous research indicates that forgetfulness and lack of habit formation lead most Filipino school children to not wash their hands after toilet use.
- Handwashing nudges are small environmental changes to the toilet and handwashing station. A package of nudges (footpath, posters, arrow sticker pointing to soap dish, and “watching eyes” sticker) installed in Zamboanga del Norte schools:
 - **Increased handwashing rates:** Rates of pupil handwashing with soap after toilet use in schools with nudges were 17 percentage points higher than schools without nudges. This is equivalent to rates in schools with nudges being 148% higher than in schools without nudges.
 - **Increased access to functional handwashing stations with soap near toilets:** Access increased by 38%.
 - **Positively affected teacher behavior:** Increases in access were likely driven by teachers replenishing stored water and soap more consistently.
 - **Is supported by the school community:** Interviewed principals, teachers, and students liked the nudges.
 - **Can be implemented at low-cost:** The nudge package would cost on average an estimated¹ PHP 3930 (\$77.51) per school, or PHP 561 (\$11.07)² per handwashing area.

CONCLUSION

Installing the nudge package in schools is a low-cost measure that can increase handwashing rates among pupils and complement current WASH in Schools (WinS) initiatives.

RECOMMENDATION

UNICEF and IDinsight recommend the handwashing nudges be implemented as a package in all suitable elementary schools in the Philippines. During the COVID-19 pandemic, the nudges are one way to prepare schools for the “new normal”. *For more details, please see page 4.*

WHAT IS A NUDGE?

A nudge is a change to choices presented to people in order to alter (“nudge”) their behavior in a predictable way.³ They may either *subconsciously* make an individual more likely to do something, or consciously motivate an individual to do so. These nudges are intended to reduce the “knowledge-behavior” gap, or the tendency for people to behave in a way that they know is not desirable. One example of a nudge is the placement of fruits at eye-level in a school cafeteria, in order to encourage students to consume healthier snacks. Another example is behavioral messages placed next to soap dispensers to remind people to wash their hands.⁴

INTRODUCTION

Handwashing with soap is considered one of the most effective measures⁵ to reduce respiratory tract infections, diarrhea, and other diseases—including COVID-19.⁶ Building hand hygiene habits among students, alongside ensuring access to water, soap, and handwashing facilities, is one of the essential infection prevention and control measures that should be implemented to help prevent the spread of COVID-19 in schools.

The Philippines Department of Education (DepEd) is actively working to improve handwashing in schools. In 2016, DepEd institutionalized the Water, Sanitation and Hygiene (WASH) in Schools Policy (WinS) in public elementary schools. WinS is a program to promote pupil handwashing with soap, along with other outcomes related to water, sanitation, and hygiene.

Elementary school children in the Philippines, however, wash their hands in school after toilet use less than 10% of the time, research⁷ by IDinsight indicates. The primary barriers to handwashing among Filipino pupils were forgetfulness and a lack of habit formation.⁸ Studies in other geographies have shown nudges can improve handwashing rates^{9,10}, but our study is the first to test them in schools in the Philippines.



Based on results from our recent study, this policy brief presents evidence on the effectiveness of handwashing nudges in Filipino schools. It also provides recommendations on implementing them to complement current WASH in Schools programs, and to increase school readiness for the ‘new normal’ during the COVID-19 pandemic.

EVALUATION OVERVIEW





Design Overview

In collaboration with DepED and UNICEF, IDinsight designed the handwashing nudges package through a multi-step process:

- Drawing on evidence on effective handwashing nudges in other geographies
- Adapting them to the Philippines’ context after conducting scoping visits to Zamboanga del Norte schools to understand local conditions
- Testing and refining nudges through pilot installations in schools

Package

The package consisted of four handwashing nudges, which were installed at each suitable handwashing area (in classrooms or outdoors) in grades 1-6. The nudges consisted of:

Nudge		Purpose
	Painted footpath with spray-painted footprints from toilet stall to handwashing area	To remind and lead students after toilet use to head to the handwashing station rather than back to their seat
	Calendar of posters about handwashing in toilet stall	To remind students to wash hands with soap immediately after toilet use, combatting forgetfulness and delivering motivating messages about cleanliness and fitting in
	“Watching eye” sticker above water source (faucet or bucket) of handwashing area	To simulate the presence of others watching students, which research indicates can create social pressure and encourage people to wash hands
	Arrow sticker pointing to soap dish by handwashing area	To remind students to wash hands with soap and to remind teachers to put out soap

Intervention Period

October 2019 - February 2020

Location & Sample Size

The evaluation was conducted in 99 randomly-selected public elementary schools in Zamboanga del Norte (49 schools in Treatment, 50 schools in Control). Zamboanga del Norte was designated as a target district for WinS programming under UNICEF’s Country Programme of Cooperation 2019-2023.

Methodology

The evaluation was a cluster randomized-controlled trial, which enables the evaluation to make rigorous causal claims. In October 2019, trained contractors installed nudges in all suitable sections in treatment schools. In February 2020, trained enumerators visited all schools in the sample to observe handwashing rates, make structured observations about the toilet stall and handwashing area, and conduct qualitative interviews.

FINDINGS

1. Pupils in classrooms with nudges washed their hands with soap 148% more often after toilet use.

Handwashing rates increased by 17.30 percentage points (pp) in Zamboanga del Norte. Compared to other nudges studies, this estimate was higher than the results of a study testing arrows in the US,¹¹ though lower than the results² of a more intensive intervention in Bangladesh. While soap availability also increased during this period, the increase in handwashing is primarily driven by student behavior change, rather than increased opportunity to wash hands due to higher availability of soap.¹³

2. Nudges led to increased access to functional handwashing facilities with soap, suggesting it positively affected teacher behavior as well as student behavior.

Student access to functional facilities with stored water near toilets increased by 12.60 pp. Access to functional facilities with water and soap near toilets increased by 20.16 pp. This is equivalent to an increase of 30% in functional facilities, and 38% in facilities with soap. There was no increase in functional facilities with running water near toilets. This suggests the nudges were encouraging teachers to put out stored water and soap more consistently.

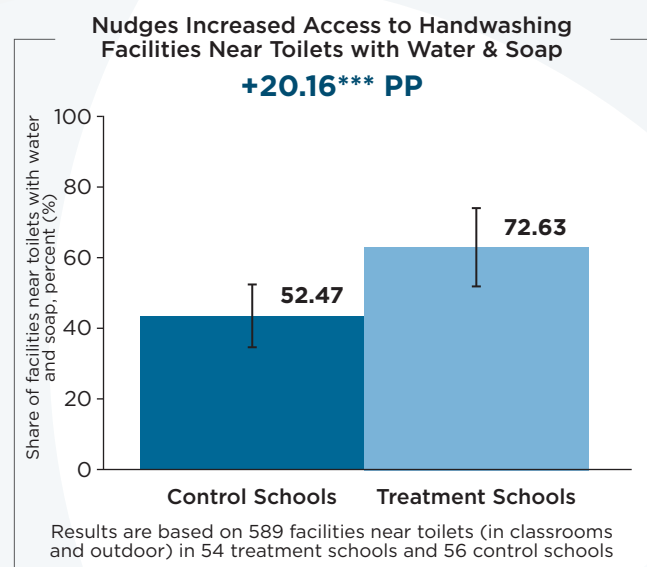
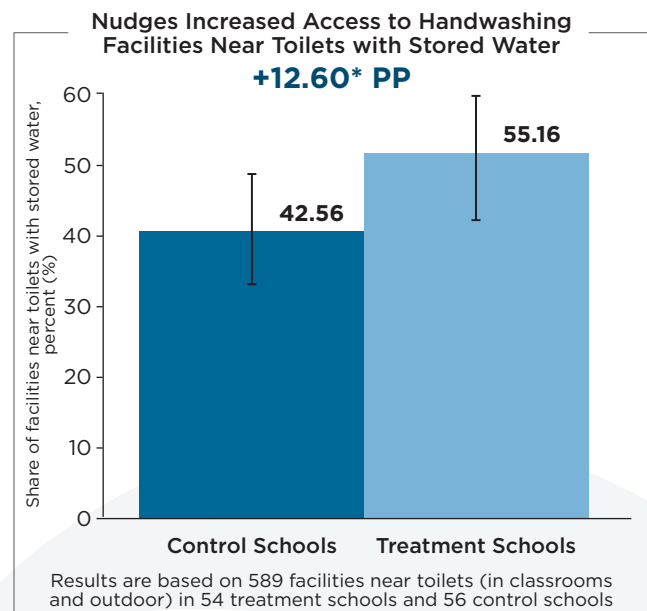
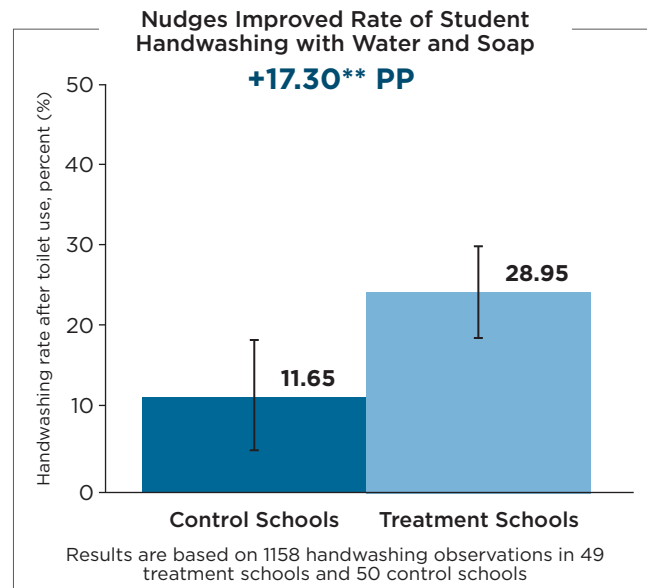
3. In qualitative interviews¹⁴, principals, teachers, and pupils all supported the nudges.

Principals and teachers appreciated the nudges because they believed the nudges would improve student hygiene practices. Pupils enjoyed interacting with the nudges and liked the way they looked in the classroom.

“As teachers, we are like mothers. If the kids are happy with it, we are also happy.” —Anonymous Teacher

4. Four months after installation, more than 75% of nudges in every category remained visible in the toilet stall or handwashing area where they were installed.

The majority of remaining nudges were in good condition. “Good condition” meant that the footpath was still clear enough for students to follow, posters were still readable, and eye and arrow stickers were still intact enough to be identifiable.



Bars represent 95% confidence intervals
 * = p-value < 0.10, ** = p-value < 0.05, *** = p-value < 0.01

RECOMMENDATIONS

1. Implement behavioral nudges to complement other WASH measures and encourage individual handwashing with soap among students

In order to maximize the utility of the nudges, we recommend that schools implement the nudges together with other initiatives that help schools meet the following characteristics:

At the School

- Pupil-to-toilet ratio of under 100
- Water available at least some hours of the school day daily
- At least one functional individual or group handwashing station near toilets

At Handwashing Area

- Functional handwashing station (with either running water or stored water regularly available)
- Functional toilet stall near handwashing station
- Clear, unobstructed, paved path from the toilet stall to the handwashing station
- Soap regularly available at handwashing station¹⁵

2. Include nudges as a part of the School Improvement Plan

Behavioral nudges cost only P561 per handwashing area and can be funded through the School Maintenance and Other Operating Expenses budget, Brigada Eskwela (a DepEd initiative for maintenance of school facilities), the Homeroom Parent-Teacher Association, and other resource mobilization activities.

Installation Cost Estimates



Cost per Classroom

₱ 561 | \$ 11.07



Cost per School

₱ 3,930 | \$ 77.51

PHP (₱), USD (\$) ©IDinsight/Project surveyors



3. Install handwashing nudges as a package (appropriately localized)

The research found that the nudges work as a package of footpath with footprints, posters, “watching eyes”, and arrow pointing to soap dish. While we encourage localization in terms of language and materials, in order to not reduce their effectiveness, it is recommended to install the nudges as a full package without major design changes

4. Utilize handwashing nudges to prepare schools for the post-COVID “new normal”

Nudges can be one of the behavioral initiatives that DepEd and school management bodies undertake to increase the impact of its investments in handwashing facilities, as part of its COVID-19 response.

1 For the per school estimate, to calculate variable costs, we assume all sections and group handwashing station in a school are eligible for nudges. In our evaluation, there were an average of 7 facilities (6 sections, and 1 group handwashing station) in a school. For the per handwashing area estimate, we distribute the school-level fixed costs equally across each handwashing area. Please note the actual cost per school and per handwashing area would vary depending on school size, due to school-level fixed costs. Both estimates also assume the school is not paying for labor. With labor, costs increase to P4930 per school, or P704 per handwashing area.

2 The conversion rate here and throughout this policy brief is PHP 50.7 = USD 1.

3 Thaler & Sunstein, 2008. *Nudge Theory*. Yale University Press.

4 Judah, G., Aunger, R., Schmidt, W.P., Michie, S., Granger, S. and Curtis, V., 2009. Experimental pretesting of hand-washing interventions in a natural setting. *American journal of public health*, 99(52), pp.S405-S411.

5 Aiello, A. E., et al. 2008. Effect of Hand Hygiene on Infectious Disease Risk in the Community Setting: A Meta-Analysis. *American Journal of Public Health*, 98(8), 1372-1381.

6 Pogrebna, G. & Kharlamov, A. (2020). The Impact of Cross-Cultural Differences in Handwashing Patterns on the COVID-19 Outbreak Magnitude. 10.13140/RG.2.2.23764.96649.

7 In our evaluation of HiFive, a behavioral change program piloted with support from DepEd and UNICEF, Filipino pupils' handwashing behavior at critical times was low as 2.2%.

8 Pupils often cited “I forgot” as the reason they did not wash their hands.

9 Blackwell, Calvin, Daniela Goya-Tocchetto, and Zack Sturman. “Nudges in the restroom: How handwashing can be impacted by environmental cues.” *Journal of Behavioral Economics for Policy* 2.2 (2018): 41-47.

10 Grover, Elise, et al. “Comparing the behavioural impact of a nudge based handwashing intervention to high intensity hygiene education: a cluster randomised trial in rural Bangladesh.” *Tropical Medicine and International Health* 23.1 (2018): 10-25.

11 Blackwell C, Goya-Tocchetto D, Sturman Z. Nudges in the restroom: How hand-washing can be impacted by environmental cues. *Journal of Behavioral Economics for Policy* 2018; 2(2): 41-47

12 Dreifelbis, R., et al., 2016; Grover, E., et al., 2018. “Comparing the behavioural impact of a nudge-based handwashing intervention to high-intensity hygiene education: a cluster-randomised trial in rural Bangladesh.” *BMC Public Health* 13, pp. 1050.

13 Our analysis found that after controlling for the nudges' effect on soap availability, the nudges still increased handwashing rates.

14 We conducted qualitative interviews in 6 schools. We selected these schools to be of different sizes and in different districts. At each school, we interviewed the principal, as well as three randomly-chosen teachers and three randomly-chosen pupils in the relevant grades.

15 While this was not part of our eligibility criteria for sections or GHW stations, 79 percent of schools in our final sample had regular soap availability, and 68 percent had MOOE funds dedicated to soap. This suggests that it is important for schools hosting the nudges to have soap provisions.

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