Final Report on the Effectiveness of Raise Your Text

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Acknowledgments

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Kalanghan en kupwuromwail koarusie!

Contents

Tables

Figures

Who We Are

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Executive Summary

Teacher absenteeism is a problem that negatively impacts educational systems in many countries, including the Federated States of Micronesia (FSM). Copying past programs which have used technology and community engagement to address teacher absenteeism, the Raise Your Text (RYT) program from August 21st to November 1st, 2018 allowed users to use mobile phone texting and emails to send in anonymous reports about when 128 Pilot teachers at 16 schools were absent from class in Pohnpei, FSM. The RYT system verified absence reports with others also signed up for the same teacher, and once an absence was confirmed, teachers were asked to provide a confirmation or denial of the absence and a reason for each absence. Teachers were also allowed to send messages to users that were signed up for their accounts to increase communication between schools and communities. The program's goals were to reduce unauthorized teacher absenteeism, increase self-efficacy towards education, improve school-community relationships, and improve communication between teachers and community members.

The program showed some impacts on reducing teacher absenteeism in elementary schools by 4-5% as compared to a control group, but the effects were not sustained across all school types nor in each evaluation study conducted. The program was able to easily identify potential fraudulent reporting by teachers of how many hours they had worked in biweekly periods, and many of the absences reported by RYT users were shown to match up with how much teachers reported being at work on their timesheets. Sentiments of self-efficacy towards education were lower overall at the end of the Pilot; however, this may have been due to a lack of engagement with the program as people in classrooms that had used the RYT system more were shown to have higher rates of self-efficacy than others. Those who signed up for RYT were also shown to have higher beliefs that the program had improved school-community relationships and communication between teachers and community members.

RYT hopes to continue working in FSM and with other developing countries in the future, increasing accountability and transparency around teacher absenteeism and entire educational systems. Every child going to public school deserves a teacher in the classroom, and the current status quo of teacher absenteeism in many countries can only be challenged by disrupting the existing attitudes towards it. With its community-based platform, RYT has the potential to not only shift these attitudes but also to help students from around the world have access to better and more accountable education.

Introduction

Access to education is a universally-accepted fundamental human right, and countries across the world spend up to a fifth of their total public spending budgets on education[1]. While much advancement has been made in aspects of infrastructure, curriculum, teacher training, and technology, corruption in education, specifically teacher absenteeism, remains pervasive with limited resources being spent to understand its nature and formulate feasible solutions.

Many countries' rates of teacher absenteeism vary between 3% to 27% of school days[2], where students across the world come to school only to find their teachers absent. In a recent study done in seven African countries, teacher absenteeism was as high as 44%, meaning that almost half of some schools' classrooms had no teachers present to teach students.[3] In Pohnpei, Federated States of Micronesia (FSM) where the Raise Your Text (RYT) team worked as Peace Corps Volunteers, 25% of teachers in 2017 were absent beyond the legal terms of their contracts, with outliers being recorded as absent as much as 40 times per year. Although there are many good reasons for teachers to be absent such as illness, many times teachers do not have valid reasons for being absent from teaching. This unauthorized teacher absenteeism is one of the main factors behind teacher absenteeism, even more so than others. For example, unauthorized teacher absences comprise 53% and 67% of Ecuador's and Peru's teacher absenteeism respectively, and in Papua New Guinea, 15% of teachers are '*ghost teachers*' that purely exist on paper to collect falsified paychecks.[4]

Should departments of education and communities care how much their teachers are absent? When teachers are absent, the obvious and most immediate consequence is students lose the ability to learn on that same day. Student learning requires teachers to be present in classrooms on time and every day, and the frequent lack of teachers in the classroom negatively impacts students in many ways. Measuring students' performances with teacher absenteeism rates, scholars agree that teachers with high absenteeism rates have students with lower test scores[5], and in a study done in Ghana, it was found that keeping all other factors constant as teacher absenteeism rates increased, the mean test scores of students decreased.[6] Not all types of teacher absenteeism are the same; unexpected absences, a large part of which are unauthorized, have a larger adverse impact on student learning than planned

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[1] Transparency International. *Global Corruption Report: Education*. Routledge University Press, 2013.
[2] Guerrero, Gabriela, Juan Leon, Mayli Zapata, Claudia Sugimaru, and Santiago Cueto. *What works to improve teacher attendance in developing countries?: A systematic review.* London: EPPICentre, Social Science Research Unit, Institute of Education, University of London, 2012.
[3] UNESCO. *Education for all global monitoring report.* UNESCO, 2017.
[4] Rogers, F. Halsey, José López-Calix, Nazmul Chaudury, Jeffrey Hammer, Nancy Córdova, Michael Kremer, and Karthik Muralidharan. *Teacher absence and incentives in primary education*. World Bank and Inter-American Development Bank, Ecuador: Creating Fiscal Space for Poverty Reduction 2, 2004; Transparency International. *Global Corruption Report: Education*. Routledge University Press, 2013.
[5] Woods, Robert C., and Ray V. Montagno. *Determining the negative effect of teacher attendance on student achievement.* Education 118, no. 2, 1997.
[6] Teacher absenteeism rate of 2%= mean score of 383.82, teacher absenteeism rate of 7%= mean score of 277.67. Obeng-Denteh, William, E. Asiamah Yeboah, Charles Sam, and J. Esi Monkah. *The impact of student and teacher absenteeism on student performance at the junior high school: the case of the Kumasi-metro school district.* Cont J Educ Res 4, no. 1, 2011.

absences, and it is very prevalent based on the education level of the school.[7] Teacher absenteeism is many times higher in elementary schools than secondary schools, and this means that students who are at a critical learning age are adversely affected more by it.[8] Besides degrading student achievement, it is also one of the main causes for student dropout rates because parents are much less likely to send their children to schools with rampant teacher absenteeism and poor qualities of education.[9]

It is not just in the short term that the effects of teacher absenteeism are seen. In the long-term community faith in education and its importance is undermined due to high teacher absenteeism rates.[10] Less instructional time, especially for students from underprivileged backgrounds, is detrimental since education is essential for social and economic growth and for decreasing existing inequalities.

When viewed from the standpoint of petty corruption on an individual scale that becomes aggregated with tens of thousands of public school teachers, widespread teacher absenteeism can become one of the largest sources of government corruption in countries. Teachers are the most valuable resource in education, and teacher salaries account for the largest expenditure incurred in many countries' education budgets (PDOE's personnel and salary budget was 83% of all educational funds spent in 2016). It is this huge amount distributed in a system that lacks adequate transparency and oversight that makes the educational sector highly vulnerable to corruption via teacher absenteeism. Just in the FSM with an education budget of a mere $32 million dollars for 100,000 citizens in 2016, RYT estimates that almost $2 million dollars were lost to teacher absenteeism per year that, and for larger countries like India, this can amount to an astounding $2 billion dollars annually.[11]

The underlying factors behind teacher absenteeism are many, but it is largely an issue of transparency and accountability, all of which are "*dangerous*" barriers to education.[12] Access to education, and equity of education, can be achieved more by addressing unauthorized teacher absences. Scholars attribute root causes of absenteeism to a lack of community influence over teacher behavior and lack of supervision within the schools themselves. Other causes for teacher absenteeism range from low salaries, teachers "*moonlighting*" as private tutors or other positions when they should be teaching, official absences due to inefficient bureaucratic systems, and using teachers for election campaigns[13].

Although not much has been done effectively to address teacher absenteeism and its impact on a global scale, there have been some prior interventions. The amount of average instructional hours in many countries is between 4-5 hours each day, and although it is not directly addressing the root causes of

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[7] Miller, Raegen T., Richard J. Murnane, and John B. Willett. *Do teacher absences impact student achievement? Longitudinal evidence from one urban school district.* Educational Evaluation and Policy Analysis 30, no. 2, 2008.
[8] Transparency International. *Global Corruption Report: Education*. Routledge University Press, 2013.
[9] Finlayson, Mary. *The impact of teacher absenteeism on student performance: The case of the Cobb County School District*. Dissertation, Theses, and Capstone Projects Kennesaw State University, 2009.
[10] Transparency International. *Global Corruption Report: Education*. Routledge University Press, 2013.
[11] Rogers, F. Halsey, José López-Calix, Nazmul Chaudury, Jeffrey Hammer, Nancy Córdova, Michael Kremer, and Karthik Muralidharan. *Teacher absence and incentives in primary education*. World Bank and Inter-American Development Bank, Ecuador: Creating Fiscal Space for Poverty Reduction 2, 2004.
[12] Transparency International. *Global Corruption Report: Education*. Routledge University Press, 2013.
[13] In pre-war Sri Lanka, teachers were required to travel to the Department of Education to collect their paychecks which could take a week at a time. UNESCO. *Education for all global monitoring report.* UNESCO, 2017.

teacher absenteeism, the Dominican Republic and Honduras have increased the total school hours per day as a way to provide more total instruction hours even when absenteeism rates are high. In addition to governments, civil societies have implemented multiple strategies such as increasing instructional hours, and others like 'Transformemos Honduras' in Honduras conduct efforts to track and monitor teacher absenteeism as a way to use data to tackle the issue.[14]

Some civil society organizations are using digital platforms to track school days (including teacher absenteeism rates), and by making this information publicly available to all stakeholders, they hope to bring data-backed improvements to their educational systems.[15] In Liberia, during the project '*Tell it True*', students could send a confidential SMS about any issue they faced, including teacher absenteeism. In Namibia, the project '*Listen Loud to Education*' used mobile phone networks to connect with students on a wide range of issues such as bribery, sexual exploitation, and teacher absenteeism.[16] Likewise, a pilot once conducted in Indian rural schools, which is now being implemented more broadly across some Indian states[17], administered mobile tablets to teachers for them to take selfies with their students every day. In this Indian program, financial incentives were tied to teachers' use of the devices and their behaviors, and the results were quite positive. Although it was still quite high at the end of the pilot, teacher absenteeism was reduced from 42% in comparison schools to 22% in treatment schools. With a 30% increase in instructional time, a year later, students also had achieved significantly higher test scores. [18]

It is essential to involve all community stakeholders for any successful and sustainable solution to teacher absenteeism. Most research suggests that external monitoring could help reduce corruption in the form of teacher absenteeism.[19] In a project in Uganda, parents and head teachers were delegated to act as monitors to improve teacher attendance rates.[20] This community monitoring resulted in the form of teacher report cards that have been proved to be successful in reducing teacher absenteeism. Similarly in other studies, it has been found that by involving parents and community members, teacher absenteeism can reduce while improving students' test scores.[21]

Reviewing all these past projects done to address teacher absenteeism, many gaps still exist which have limited programs' success and their ability to scale to other countries. First, many countries do not have large education budgets to spend on increasing teacher work hours to increase the total instructional hours for students. Departments of education have budgets which do not allow for capital-intensive

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[14] The Dialogue, PREAL Report Card. *Setting the Stage for Improved Learning: The State of Teacher Policies in El Salvador, Guatemala, Honduras and the Dominican Republic*. The Dialogue, 2015.
[15] The Dialogue, PREAL Report Card. *Setting the Stage for Improved Learning: The State of Teacher Policies in El Salvador, Guatemala, Honduras and the Dominican Republic*. The Dialogue, 2015.
[16] Transparency International. *Global Corruption Report: Education*. Routledge University Press, 2013.
[17] India Today. *Teacher absenteeism in govt schools to be tackled by sharing selfies taken with students*. India Today, 2018.
[18] Duflo, Esther, and Rema Hanna. *Monitoring works: Getting teachers to come to school*. National Bureau of Economic Research, 2005.
[19] Patrinos, Harry Anthony. *The hidden cost of corruption: teacher absenteeism and loss in schools*. The World Bank Blog, 2013.
[20] Cilliers, Jacobus, Ibrahim Kasirye, Clare Leaver, Pieter Serneels, and Andrew Zeitlin. *Improving teacher attendance using a locally managed monitoring scheme: Evidence from Ugandan Primary Schools.* Rapid response paper for International Growth Centre, 2013.
[21] UNESCO. *Education for all global monitoring report.* UNESCO, 2017.

solutions which take away from other needs such as constructing new schools and updating textbooks. This requires solutions that are of low operating cost and minimal capital investment to improve teacher attendance and instructional hours. Second, a large portion of the population in the developing world does not yet have access to smartphones that can run programs like WhatsApp and other mobile applications. Technology that they do not have or is too expensive to purchase excludes people from joining in on the solution, and the technology curve for individuals to adopt a new program must be small or else it will require many people on the ground to train on the correct technological use. Third, many prior projects do not protect the anonymity of people willing to speak out against teacher absenteeism. WhatsApp groups do provide a sense of community, but they limit the amount of protection for people speaking out against teachers. Living in small communities with high rates of teacher absenteeism requires solutions that protect people's ability to speak out while also not completely publicly shaming the teachers with poor attendance behaviors. Anonymity is the solution to increase people's willingness to speak out against widescale problems, especially when the teacher is a student's uncle or neighbor.

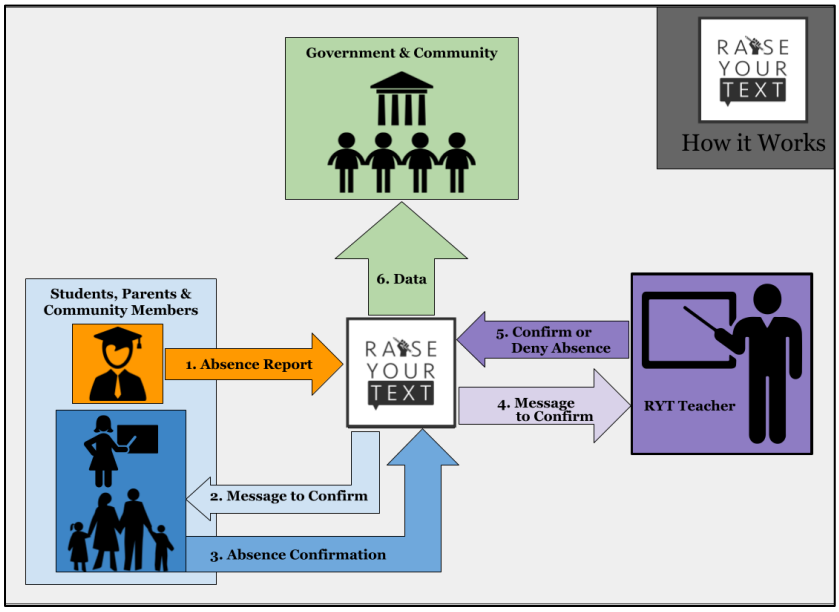
Taking these gaps into account, the RYT Pilot was designed and implemented to overcome the limitations of past interventions, aiming to successfully reduce teacher absenteeism and collect credible data on teacher attendance on the island of Pohnpei, FSM.

To analyze the impact of RYT Pilot, the following report is divided into six parts. Starting with a comprehensive description of the RYT system and the Pilot conducted to test it, the report moves on to discuss the methods of testing the impacts of the system on improving teacher attendance, self-efficacy, school-community relationships, and teacher-community communication. Data and anecdotes are then presented to support and negate each of these four hypotheses, and the conclusion summarizes the findings and future of RYT.

What is The Raise Your Text System?

Developed by Nicholas Canfield, Prathima Appaji, and Richard Clark, RYT is an anonymous accountability platform designed to reduce unauthorized teacher absenteeism and increase collaboration and transparency in student-teacher and teacher-community relationships.

Figure #1: How the Raise Your Text System Works



Through the RYT platform, students, parents, coworkers, and general community members (collectively called non-teacher users, henceforth "NTUs") signed up to join a teacher's account to monitor that teacher's work attendance at their school. Absences could be reported for a teacher's whole day or for particular classes and times of the day, and absences were required to be reported on the same day that they occurred as to not create confusion between days and classes. NTUs sent in anonymous teacher absence reports which were then confirmed by asking other NTUs signed up for the same teacher's account if the information was correct. If the teacher had also signed up for their assigned account, the teacher was then asked if yes/no they were absent and to provide a reason for their absence.

All data was collected and provided to government and community members via text message and the RYT "*Reports*" page online (www.raiseyourtext.com/reports) to make better-informed decisions and to place pressure on teachers to reduce their unauthorized absences. Recognizing the importance of privacy, the RYT system encoded teachers' names to protect their privacy, and it ensured that all users' data was anonymous so that they would feel free to report, confirm, and view absences.

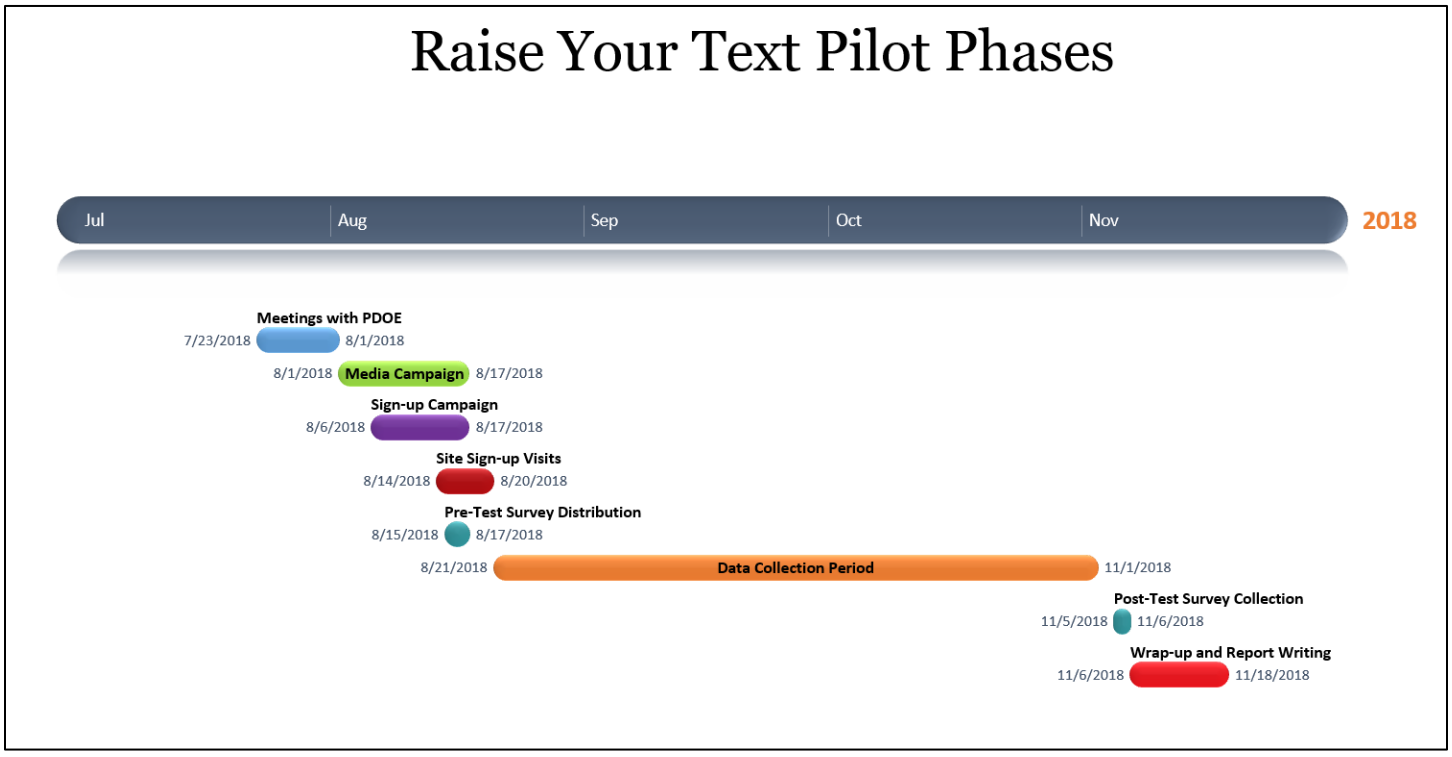
RYT also aimed to increase school-community engagement and communication by providing a platform for teachers to send messages such as homework help and school event information to people signed up for their accounts. The purpose of this functionality was to involve the parents more in school activities and information while granting teachers a way to effectively engage with their surrounding communities. Combining both the abilities to report absences and message school communities, RYT

tried to create a better school environment where teachers could be held accountable for their attendance and where information could flow better between teacher, schools, and their communities.

How the RYT Pilot Was Run

The RYT Pilot was a joint effort between Raise Your Text and the Pohnpei Department of Education (PDOE). The Pilot took place on the island of Pohnpei in the FSM, estimated to have a population of around 35,000 citizens and 10,000 primary and secondary students. Working together with the PDOE, RYT selected 16 schools[22] located on the mainland of Pohnpei at which up to 40% of each school's teacher population would be monitored by an anonymous accountability platform maintained through mobile phones and email. Pilot teachers were selected at random from a listed provided by the PDOE, and these teachers were then verified to be active teachers during meetings with each school's principal. During the Pilot, RYT held 22 separate school and community meetings to discuss the Pilot and train the community on how to use it. Radio and Facebook live interviews, radio ads, banners, school visits, sign-up days and social media (Facebook and Instagram) marketing strategies were conducted to increase awareness of the problem of teacher absenteeism, market the program, and to motive people to sign-up and use the service.

Figure #2: Raise Your Text Pilot Phases



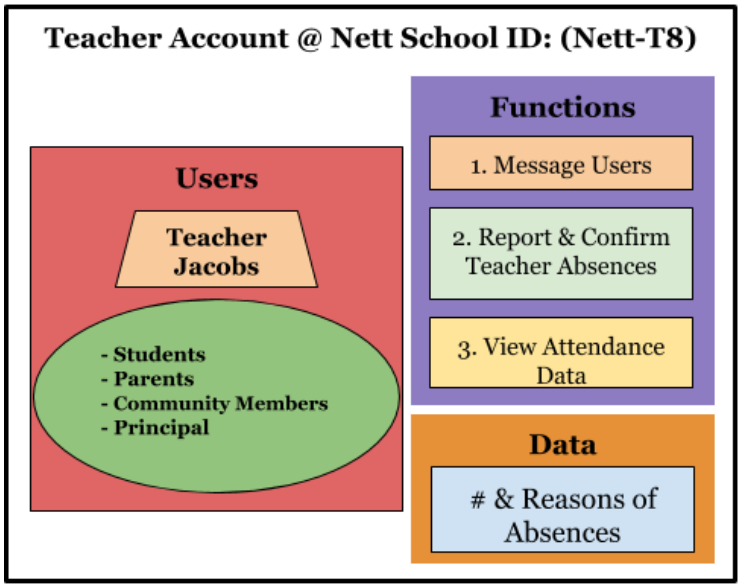
Over the course of the Pilot lasting for 11 weeks (51 school days) from August 21st to November 1st, 527 individuals signed up for RYT for one of 128 teacher accounts; however, there were only 485 users at the end of the Pilot due to expired emails and people asking to unsubscribe from a teacher account. There were two ways to sign up. The first was in person when RYT staff conducted sign-up visits at all

[22] For a complete list of Pilot schools, refer to Table #20 in the Annex.

RYT Pilot schools from August 14th - 21st. The second was via the sign-up page on the RYT website (www.raiseyourtext.com/sign-up). Facing an initial hurdle with low accessibility and affordability of mobile phones, registration was expanded to include emails and Websms, an FSM online platform that allows people to send and receive text messages from a web browser. During sign-up, users were required to indicate a contact method (mobile, Websms, or email) and the teacher whom they wanted to hold accountable. Users also could only sign up for one teacher account at their school so that they would feel accountable to that one teacher's account. RYT Pilot teachers were only allowed to sign up for their own teacher account. RYT verified the identity of Pilot teachers signing up for their accounts by either their physical presence during the sign-up visits or by teachers typing in their specific teacher account password which was sent to principals via email to distribute to each Pilot teacher.

A teacher account was the place where teachers, students, parents, principals, and community members placed their contact method (mobile, Websms, or email) to be able to report, confirm, and view absence reports for one teacher by which the account was named. For example, if teacher Jacobs was a part of the Pilot teacher group, he would have a teacher account (e.g. Nett-T8) where his students and community members would sign up to hold him accountable. In his account, those signed up for teacher Jacobs could report, confirm, and view his absences anonymously, and teacher Jacobs could send out messages to the people signed up for his account. The account also was the place where teacher attendance reasons and numbers were stored so that they could be compared to other teachers and collectively to other schools if a user asked for the information via text or email or if they viewed the "*Reports*" website.

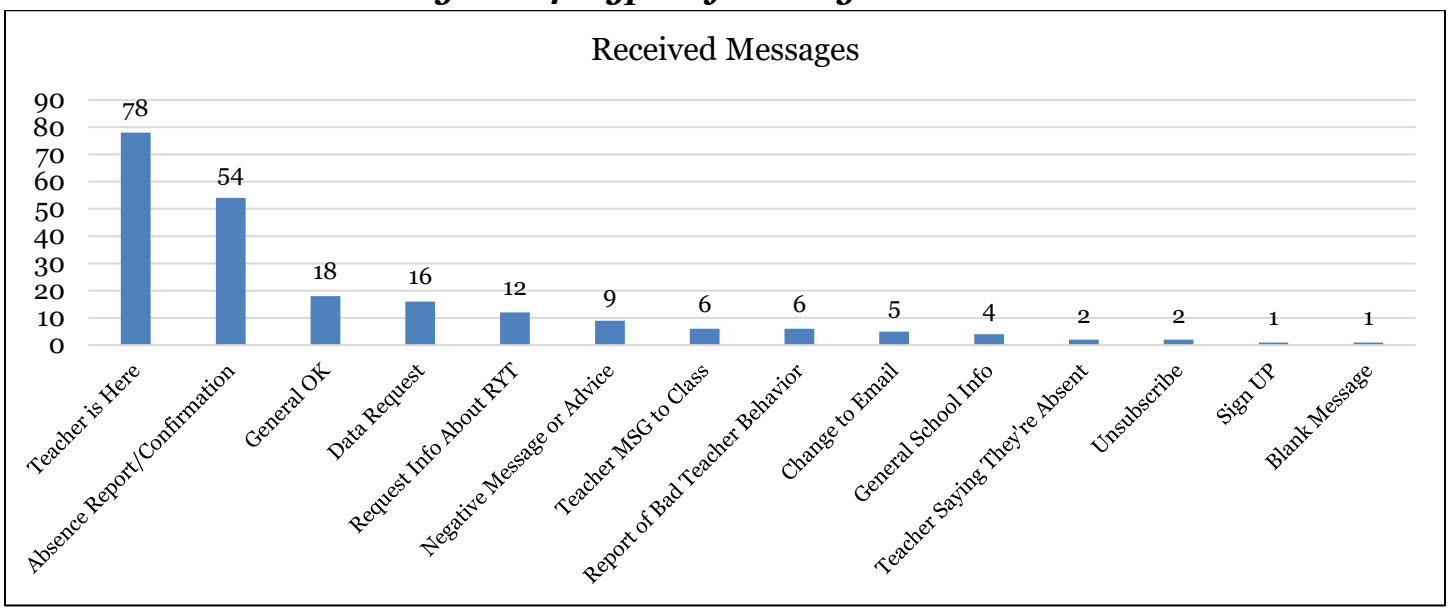
Figure #3: Teacher Account Diagram



84% of teacher accounts (108 of 128) had the minimum number of users required (a minimum of 2) to be able to report and confirm a teacher's absence; the other 20 teacher accounts were not able to accurately submit teacher absence reports due to not enough NTUs on their teacher account. 99 people (10 non-signed-up & 89 RYT users) sent in 214 messages, 202 of them being from RYT users. Of the 202 messages received from RYT users, 76% were from cell phones, 5% from Websms, and 19% from email. Message types varied widely, but the most common message from users was a simple reply of

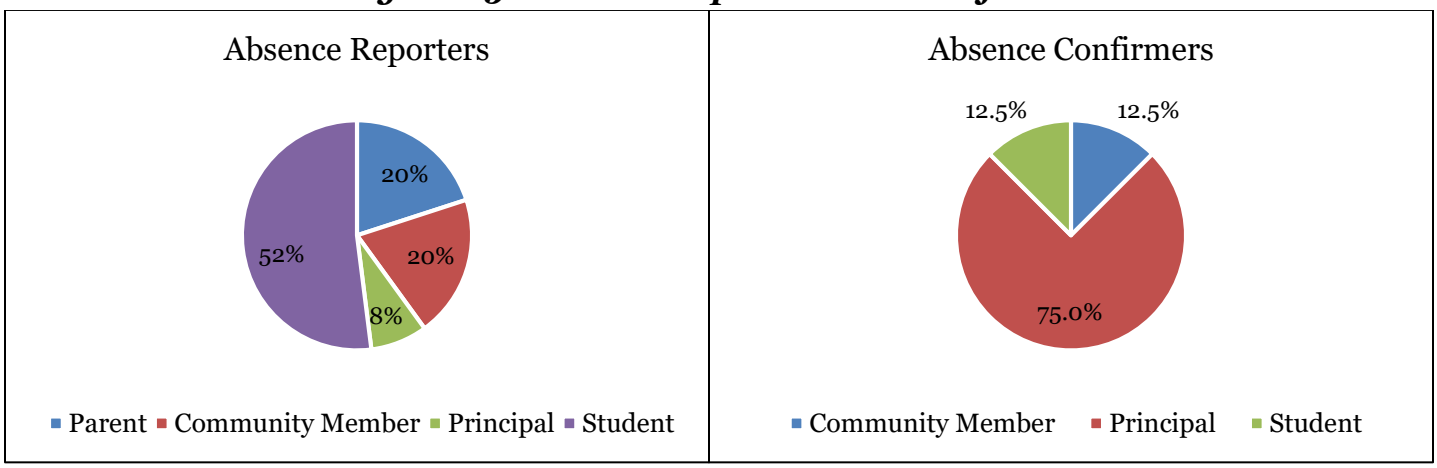
"*yes, my teacher is here today*" after having received a twice-weekly reminder message directly via text, Websms, or email.

Figure #4: Types of Messages Received



Typically, absences would be reported by students first and confirmed by their school's principal.

Figure #5: Absence Reporters and Confirmers

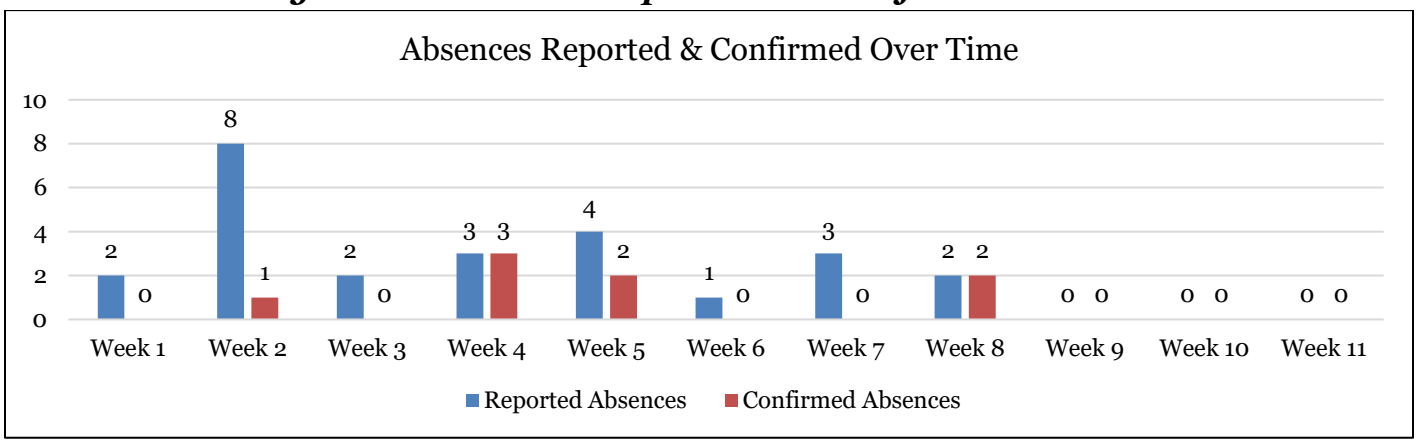


Teacher Absence Reports

A total of 25 teacher absence reports were intermittently sent in by users (see Figure #6 below) from the 1st to the 8th week of the study. No reports were received between the 9th and 11th weeks. The most heavily reported week was week two with a total of eight absence reports (only one absence was confirmed). There were 0.196 absence reports per teacher (25 total reports for 128 teachers) and only 0.063 confirmed absences per teacher (8 confirmed reports). For the total number of 6,487 teacher-workdays (total workdays X teachers), the average absence rate was 0.39% according to all RYT absence reports and 0.12% for confirmed absences. Of course, this rate is not an accurate representation of absence rates for RYT teachers. Compared with both the Morning and Afternoon Absences studies at

schools (3-16%), the rate is at least 10X as small as reality would have. This is most likely due to the barriers and challenges to reporting absences including 1) $0.10/text message sent, 2) bystander effects, 3) confusion by users of what counts as an absence, 4) limited users on teacher accounts, 5) users not wanting to get teachers in trouble, and 6) user apathy. These are all challenges and barriers to reporting that RYT will be addressing in the future in various ways such as finding cost reductions for reporting via text, changing the RYT platform to making it easier to understand, clearer and more direct instructions, increasing efforts to sign-up more users, and better marketing to focus on the benefits of reporting teacher absences.

Figure #6: Absences Reported and Confirmed Over Time



In addition to the RYT reporting system itself, the Pilot project also included two separate studies to conduct onsite visitations to determine whether RYT Pilot teachers were at work at a higher rate compared to non-pilot teachers. More on these studies are given in the Methodology section. These studies were instrumental in supporting and negating the main hypotheses of the RYT Pilot.

Hypotheses

The RYT Pilot had two main goals. The first, and most essential, was to reduce the rate of teacher absenteeism (specifically unauthorized absences) in the Pilot teacher group of 128 teachers compared to the control group of non-pilot teachers. The second, which can be broken down into three different parts, was to improve the school communities of each Pilot school.

H_1 = Being a Raise Your Text teacher will have a statistically significant and positive effect on teacher attendance.

RYT creates positive community pressure for teachers to come to work, especially when they are most likely to skip work for unauthorized reasons. It also supports principals in their duty to clamp down on teachers' absenteeism issues at their schools. Instead of using a hierarchical approach, principals can use the community's support as shown through absenteeism reports to indicate to teachers with absenteeism problems that they need to improve. It also provides additional pressure on teachers to improve their attendance from the PDOE because they now have verified attendance data from schools. As to this last point, the PDOE did not use this capability as much as intended to decide on biweekly paychecks to teachers; however, the increased consequences of a teacher getting caught in falsifying their timesheets was a definite factor for many teachers' attendance performance. In these ways, RYT Pilot teachers were hypothesized to have better attendance rates (especially for unauthorized absences) than their non-RYT colleagues at their schools.

H_2 = Raise Your Text will improve the self-efficacy of students, parents, and community members towards changing how government provides public services, specifically education.

Providing people a means of solving a problem, in any case, should increase their feelings of being able to affect that problem. In this way, RYT should increase the general sentiment of community members that they can positively affect their educational system, specifically for teacher absenteeism.

H_3 = Raise Your Text will improve the relationships between teachers and students, parents, and community members.

By allowing teachers to send messages to their users and by creating a sense of openness and transparency between teachers and NTUs, the relationships between them should improve. Also, through the indirect route of increased teacher attendance, students and others should feel better about their teachers and school communities because they are receiving better service from teachers.

H_4 = Raise Your Text will improve the communication link between teachers and students, parents, and community members.

Messages to NTUs from teachers should improve how school information is communicated and received by those in the community. Although it is entirely dependent on how many messages are sent

from teachers to others, this new ability for teachers should improve the flow of information between teachers and NTUs.

To support or disprove each one of these hypotheses, five different studies were conducted which served to measure teacher attendance rates and gauge the community's sentiments behind the Pilot and the problem of teacher absenteeism in Pohnpei. These studies are discussed below in the Methodology portion of the report.

Methodology

Morning Absences Study

This study[23] was conducted over 5 days, randomly chosen during the last 3 weeks of September 2018 on which 3 RYT Pilot schools and 3 non-RYT Pilot schools were chosen through a random generator for each day. At the 3 chosen non-RYT schools, 20 teachers were selected through the same generator for each of the 5 days, replacing them into the pool of teachers for each selection. The same process happened for the 3 selected RYT Pilot schools with 20 non-pilot and 20 Pilot teachers being randomly selected separately from each other to create a total of 60 teacher observations per day. RYT staff went to these schools with its list of the randomly selected teachers to record their attendance in school.

Because of complications with staffing and scheduling in real time, two schools were chosen based on convenience for the first and last days. Some schools were visited one hour later than others (9:30 AM vs. 10:30 AM) to create some variability in time measurements. Schools were not notified that the observations would be occurring before they happened. RYT staff only marked teachers as being present if they physically saw them inside the classroom. 28 school staff were unable to be observed due to either (1) being incorrectly placed on the teacher lists due to outdated data from the PDOE or (2) having a free period with no class scheduled during the observation time.

Afternoon Absences Study

Like the Morning Absences Study above, five study days were chosen at random between October 22nd and November 1st, 2018 to take teachers' attendance after lunch at 1 PM[24]. The following days were generated: October 23rd (Tuesday), 25th (Thursday), 26th (Friday), 29th (Monday), 31st (Wednesday). An additional day, November 1st (Thursday), was added not at random because it was the last day of the Pilot and because of a desire to increase the RYT teacher observations. For the first 3 study days (23rd, 25th, 26th), 3 RYT Pilot schools and 2 non-pilot schools were randomly chosen to have all their teachers observed on each day. On the next 2 study days (29th and 31st), 2 Pilot schools and 3 non-pilot schools were randomly chosen to have all their teachers observed on each day. On the final day (November 1st), all the teachers at 6 randomly chosen RYT Pilot schools were observed. The total number of teachers monitored per day varied depending on the teacher populations of each school. RYT staff were instructed to visit each school at exactly 1 PM (the time when lunch ended) to physically observe if each teacher on their school list was 1) physically present in class and/or 2) physically present on the school campus.

In Pohnpeian elementary schools, Early Childhood Education (ECE) and 1st through 2nd grades have class scheduled only until 12 PM. Because of the differences in classroom hours between elementary and secondary schools, different teacher types (Regular, Early Childhood Education, etc…), and other official PDOE duties requiring teachers to be away from their classrooms, the following definitions were used to operationalize being present in class and school.

[23] To see a list of the schools and days of this Morning study, view Table #21 in the Annex.
[24] To see a list of the schools, days, and descriptive statistics of the Afternoon study, view Table #22 and Table #23 in the Annex.

In Class = If the staff has a teaching responsibility for grades 3-12 and the teacher was not suspected to be attending an official PDOE meeting, then "*yes*" if physically seen in the classroom and "*no*" if not.

In School (Easy) = If the staff has a teaching responsibility and was not suspected to be at a PDOE meeting, then "*yes*" if physically seen on the school campus and "*no*" if not.

In School (Harsh) = If the staff has a teaching responsibility, then "*yes*" if physically seen on the school campus and "*no*" if not.

Because of transportation issues with 3 RYT staff scheduled to conduct observations, two Pilot schools (Seinwar Elementary School on October 25th and Palikir Elementary School on the 31st) were not able to be observed. Another change was made to 3 schools' chosen observation times. PICS High School was originally chosen to be observed on Friday, October 26th, but RYT staff were told correctly that a large afternoon party was to be held on the entire campus that afternoon. Because of this, PICS' observation day was moved to the next day (Monday, October 29th) and Enipein Elementary School was moved to that Friday. On November 1st, RYT staff was notified that CCA was having a report card day when no classes would be held, so it was removed from the study. Additionally, school lists were not entirely correct based on the current staff at those schools, so any current teachers not on the list were added in addition to teachers being deleted because of being retired, deceased, or former employees. Schools were not notified that the observations would be occurring before they happened, and RYT staff were instructed to gather as much information as possible about each teacher's attendance situation to best determine the attendance determination of each teacher.

Pre/Post Pilot Parent & Student Survey

A 13-question in-paper survey was administered to 10 randomly selected RYT Pilot teacher's classrooms at 6 schools (MHS, NHMS, Pehleng, Pohnlangas, Seinwar, and Sekere) to measure students' and parents' pre/post sentiments on teacher absenteeism, self-efficacy, teacher-community relations, and teacher-community communication. The pre-pilot survey was administered on August 15th and collected on August 16th, the week before people could submit absence reports. The Post-pilot Parent & Student survey with the same questions (with one additional question of "*I Like Raise Your Text*") was administered to the same classrooms on November 5th and collected on November 6th. The survey included demographic questions including the following questions in the same order as in Table #1.

Table #1: Pre/Post Pilot Parent and Student Survey Questions

Question	Measure
Teacher absenteeism is a big problem in Pohnpei.	Scope of Teacher Absenteeism
Teacher absenteeism in Pohnpei negatively affects my (child's) education.	Size of Teacher Absenteeism
My (child's) teachers do not come to school many times.	Size of Teacher Absenteeism
I feel that I can impact how much my (child's) teacher comes to school.	Self-efficacy for Education
I feel connected with my (child's) teacher in that I know what happens at school.	Teacher-community Communication
I feel that I can improve how government provides me services like education.	Self-efficacy for Education
I feel that Raise Your Text can be my voice to improve education in Pohnpei.	Self-efficacy for Education
I believe transparency in government and education is important.	Opinion of Government Transparency
I like Raise Your Text. *(ONLY INCLUDED ON POST-TEST SURVEY)*	Public Perception of RYT Program

On November 5th, RYT staff was notified that one teacher had been relieved of his teaching duties, so another RYT Pilot teacher at the same school was administered the surveys for his class. An Anova analysis of variance between each survey period's responses were conducted using 95% confidence intervals to test if RYT showed any effect on teacher absenteeism (H_1), self-efficacy (H_2), relationships between teachers and community members (H_3), and the teacher-community communication link (H_4).

Raise Your Text Community Survey

An RYT Community Survey, not just for parents and students like the Pre/Post Pilot Parent & Student Survey, was administered to schools after the data collection period was completed. Questions measure community sentiment towards RYT, its effects on teacher absenteeism, and its effects on improving school communities. The survey period lasted from October 31st to November 6th. The first send-out method was via an initial text message and email including a link to the 13 question online Google Forms survey sent on October 31st to all RYT signed up users and some PDOE main office staff. One reminder message (email or text) was sent on November 5th. The second method was via posting a link to the online survey on the RYT Facebook page (www.facebook.com/RaiseYourText) on October 31st; 2 reminder Facebook posts on the page were posted. The last method was a paper survey delivered at the same time as the Post-Pilot Parent & Student Survey above to the six targeted schools. The survey questions, including their intended measures and answer types, are indicated in Table #2.

Table #2: RYT Community Survey Questions

Question	Measure
I understand how Raise Your Text works.	Program Engagement
I support Raise Your Text.	Program Support
Raise Your Text improved teachers' attendance at my school(s).	Effect on Teacher Absenteeism
Raise Your Text improved how teachers at my school(s) interact with students.	Effect on Teacher-Student Interactions
Raise Your Text improved the relationship between my school(s) and the local community (communities).	Effect on School-Community Interactions
I feel like I was able to use Raise Your Text as a tool to improve teachers' attendance at my school(s).	Self-efficacy Towards Education
Raise Your Text should continue its work in Pohnpei.	Program Support
What is the best part of the Raise Your Text Program?	Program Support
What is the worst part of the Raise Your Text Program?	Program Support
I am a…	Demographic
I signed up to use Raise Your Text.	Program Engagement
Ma kowe lel Madolenihmw sang Kolonia, kowe pahn… *(ONLINE VERSION)*	Verification of Being from Pilot Location
If you would like to share any comments or experiences about Raise Your Text, kindly share them here.	Program Support

To weed out non-Pohnpeian respondents from the online survey, a required question was included about a very easy and cultural understanding of Pohnpeian language and culture of the island. Analysis of questions' means as a whole population and by demographics were calculated to support or negate hypotheses H_1, H_2, H_3, and H_4.

PDOE Teacher Timesheets

To test H_1 about the effects of RYT on teacher absenteeism, the RYT team visited the PDOE's main office on Monday, October 22nd to view teacher attendance records from the 1st semester 2017 and the 1st semester 2018 (the Pilot period). After discussing with the office administration about the best way to access this data, RYT staff were provided with a list of Microsoft Excel files including the Pilot schools' timesheet records from certain pay periods of the last and current school years. While conducting an initial check of the files, notable inconsistencies were seen such as future time periods already having been filled out and multiple staff listed for schools at which they did not work. The RYT team then decided to view the direct physical papers on which biweekly hours had been input from PDOE main office staff once they had received attendance records from school principals. These biweekly papers

presented less obvious errors and included both time periods (Fall 2017 & 2018) of the study's focus, so the team decided to use those to compare the timecard hours for RYT Pilot teachers from fall semesters 2017 and 2018. The most congruent biweekly time periods that were available from the past year and from the Pilot period were used. Some schools were missing staff and/or biweekly pay period data for each period. To solve this, the most recent and adjacent week if a week was missing was utilized for those schools. Biweekly pay hours were calculated by adding the listed hours worked + vacation hours for each period, with the assumption of an 80 hour pay period. There were 5 available pay periods for 2017 and 3 for 2018. The RYT team also returned on November 15th to identify if any of the missing and/or yet to be reported timesheets from the first visit on October 22nd were able to be viewed. Only one timesheet that had yet to be reported from the first visit was available; however, it needed to be viewed from the original problematic Excel files as discussed above.

First, it must be noted that these records only provide evidence of how much teachers were paid, not how much they worked and/or were physically present in their schools and classrooms. Pohnpei's teacher workforce was known to frequently use tactics that undercut the connection between hours worked and hours paid such as marking down hours on their timesheets for future days in the week. An analysis was conducted to compare the averages of each period to show if RYT teachers had a significant difference in the number of work hours they claimed during the fall semester 2017 compared to the RYT Pilot period of fall semester 2018. Any significant differences between the means would support that the RYT Pilot influenced the timesheet logging behaviors of teachers, but it would not be able to support or negate any increase or decrease in actual hours worked. The reported biweekly hours worked by each teacher will also be compared with internal RYT teacher absences as reported by users to identify the overlap or if any teachers marked down hours that they had not earned according to their communities.

H1: Does Raise Your Text Reduce Teacher Absenteeism?

To support whether RYT had a significant and positive effect on the attendance of teachers in Pohnpei, we shall review the results from the 1) Morning Absences Study, 2) Afternoon Absences Study, 3) PDOE Teacher Timesheets, 4) Pre/Post Pilot Parent & Student Surveys, 5) and RYT Community Survey. All these sources together provide an overall picture of how changes in teacher absence rates were observed by all parties: RYT, the PDOE, and the Pohnpeian community at large.

Reviewing data from the Morning and Afternoon Absences Studies, being a teacher involved in the RYT Pilot holds only a significant effect for elementary school teachers during the morning period; however, in both studies, RYT teachers were observed to be more present in rural and highly accredited schools and for female and highly educated teachers. Other variables shown to significantly impact teacher attendance were a school's accreditation level, urbanity, and teacher's age.

Table #3: Comparing RYT's Effect on Morning and Afternoon Absences

	MORNING	**AFTERNOON**		
	PRESENT	**IN CLASS**	**IN SCHOOL (EASY)**	**IN SCHOOL (HARSH)**
PILOT TEACHER **(NO)**	92.8%	86.6%	87.0%	84.1%
PILOT TEACHER **(YES)**	97.1%	87.1%	84.6%	83.5%
# of Teachers	272	347	481	496

Table #4: Morning Absences Study – Effects of Raise Your Text

	All Schools				**Elementary Schools Only**					
DV: Present	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
Pilot Teacher	1.079	1.198	0.576	1.071	**1.891***	**1.939***	**1.893***	0.892	0.709	**1.999***
Female	-0.176		-0.179	-0.212	-0.280		-0.279	-0.239	-0.295	-0.227
Age	0.031		0.031	0.032	0.050		0.050	0.044	0.050	0.043
Highest Degree Achieved	0.847		1.217	0.989	0.012	-0.118		-0.089	0.092	-0.208
Accreditation Level	**0.698***	**0.706***		**0.693***	**0.962****	**0.971****	**0.962****			**1.173****
Urban	**2.442***	**2.471***		**2.582***	1.745	1.625	1.745		**2.187***	
Secondary School	0.208	0.451								
Constant	-2.066	-0.100	0.124	-2.179	-2.602	-0.730	-2.590	0.913	0.138	-2.373
N	255	259	255	255	194	197	194	194	194	194
Pseudo R^2	0.178	0.166	0.046	0.177	0.187	0.167	0.187	0.039	0.113	0.150

Notes: 95% Confidence Intervals using 2-Tailed Tests. Logit Coefficients listed with significance p values noted with **bold font** and ***(<.05), **(<.01), ***(<.001)**.

Table #5: Afternoon Absences Study – Effects of Raise Your Text

Variables	IN CLASS				IN SCHOOL (EASY)				IN SCHOOL (HARSH)			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12
Pilot School	-0.427				-0.027				-0.002			
Pilot Teacher	0.189	.098	0.242	-0.004	-0.181	-0.189	-0.162	-0.174	-0.132	-0.133	-0.085	-0.099
Female	0.212	.212		0.265	-0.055	-0.055		-0.075	0.157	0.157		0.118
Age	-0.006	-.005		-0.007	**-0.033***	**-0.033***		**-0.032***	-0.015	-0.0148		-0.014
Highest Degree Achieved	-0.063	-.030		-0.267	-0.407	-0.405		-0.332	-0.280	-0.280		-0.157
School Accreditation Level	0.357	.360	0.205		**0.439***	**0.439***	0.251		0.295	0.295	0.163	
Secondary School	0.010	-.224	-0.282		0.411	0.397	0.044		0.462	0.461	0.231	
Urban	0.110	.024	-0.026		0.508	0.502	0.302		0.314	0.313	0.196	
Monday	-0.529	-.398	-0.573	-0.985	-0.422	-0.417	-0.385	-0.588	-0.523	-0.523	-0.560	-0.562
Tuesday	-0.254	-.127	-0.195	-0.244	-0.363	-0.355	-0.236	-0.278	-0.246	-0.245	-0.205	-0.133
Thursday	0.695	.646	0.000	0.344	0.720	0.713	0.244	0.183	0.245	0.244	-0.069	-0.059
Friday	0.092	.137	-0.004	0.035	-0.271	-0.266	-0.153	-0.262	-0.599	-0.599	-0.493	-0.565
Constant	1.544	1.203	1.603	**2.919***	**2.860***	**2.843***	1.227	**4.208****	2.031	2.029	**1.401***	**2.806****
Observations	312	312	347	312	427	427	481	427	441	441	496	441
Pseudo R^2	.061	.059	.034	.046	.050	.050	.014	.033	.025	.025	.010	.016

Notes: Logit coefficients listed with their p-value significance levels ** p<0.01, * p<0.05. Two-tailed tests with 95% confidence intervals were used.

Table #6: Absence Rates by RYT, School, and Teacher Characteristics

			Morning Study		Afternoon Study (In School Harsh)	
			Pilot Teachers **NO**	Pilot Teachers **YES**	Pilot Teachers **NO**	Pilot Teachers **YES**
RYT PILOT SCHOOLS	**All**	All	93.1% (+/-5.9%) N = 72	97.1% (+/-3.2%) N = 105	84.4% (+/-5.3%) N = 179	83.4% (+/-6.1%) N = 145
	Rurality	Rural	76.2% (+/-18.7%) N = 21	92.5% (+/-8.3%) N = 38	83.5% (+/-7.2%) N = 103	90% (+/-6.2%) N = 90
		Urban	100% (+/-0%) N = 51	100% (+/-0%) N = 65	85.5% (+/-8%) N = 76	72.7% (+/-11.9%) N = 55
	Gender	Male	88.6% (+/-10.7%) N = 35	97.6% (+/-4.7%) N = 42	86.1% (+/-7.7%) N = 79	81% (+/-9.8%) N = 63
		Female	97.0% (+/-5.9%) N = 33	96.3% (+/-5.1%) N = 54	82.8% (+/-7.5%) N = 99	84.8% (+/-8%) N = 79
	School Accreditation Level	Low (1&2)	82.8% (+/-14.0%) N = 29	98.0% (+/-3.9%) N = 50	82.5% (+/-9.4%) N = 63	77.4% (+/-11.4%) N = 53
		High (3&4)	100% (+/-0%) N = 43	96.4% (+/-5.8%) N = 55	85.3% (+/-6.5%) N = 116	87% (+/-6.9%) N = 92
	School Level	Elementary	88.6% (+/-9.5%) N = 44	96.8% (+/-4.4%) N = 62	85.3% (+/-6.7%) N = 109	82.4% (+/-8.7%) N = 74
		High School (Includes CCA)	100% (+/-0%) N = 28	97.7% (+/-4.6%) N = 43	82.9% (+/-8.9%) N = 70	84.5% (+/-8.5%) N = 71
	Highest Degree Achieved	High School & Associates	90.2% (+/-8.2%) N = 51	94.7% (+/-5.8%) N = 57	85.5% (+/-6.4%) N = 117	80.8% (+/-9.1%) N = 73
		Bachelors & Masters	100% (+/-0%) N = 17	100% (+/-0%) N = 38	79.5% (+/-12.8%) N = 39	82.8% (+/-9.8%) N = 58
ALL SCHOOLS	**All**	All	92.8% (+/-3.9%) N = 167	97.1% (+/-3.2%) N = 105	84.1% (+/-3.8%) N = 351	83.5% (+/-6.1%) N = 145
	Rurality	Rural	89.2% (+/-6.0%) N = 102	92.5% (+/-8.3%) N = 38	81.4% (+/-4.9%) N = 242	90% (+/-6.2%) N = 90
		Urban	98.5% (+/-3.0%) N = 65	100% (+/-0%) N = 65	89.9% (+/-5.7%) N = 109	72.7% (+/-11.9%) N = 55
	Gender	Male	93.0% (+/-6.0%) N = 71	97.6% (+/-4.7%) N = 42	84.3% (+/-6.2%) N = 134	81% (+/-9.8%) N = 63
		Female	92.4% (+/-5.4%) N = 92	96.3% (+/-5.1%) N = 54	83.8% (+/-4.9%) N = 216	84.8% (+/-8%) N = 79
	School Accreditation Level	Low (1&2)	85.7% (+/-11.8%) N = 35	98.0% (+/-3.9%) N = 50	85.3% (+/-8.1%) N = 75	77.4% (+/-11.4%) N = 53
		High (3&4)	94.7% (+/-3.8%) N = 130	96.4% (+/-5.8%) N = 55	83.7% (+/-4.4%) N = 276	87% (+/-6.9%) N = 92
	School Level	Elementary	91.4% (+/-4.7%) N = 139	96.8% (+/-4.4%) N = 62	84.3% (+/-4.3%) N = 281	82.4% (+/-8.7%) N = 74
		High School (Includes CCA)	100% (+/-0%) N = 28	97.7% (+/-4.6%) N = 43	82.9% (+/-8.9%) N = 70	84.5% (+/-8.5%) N = 71
	Highest Degree Achieved	High School & Associates	92.1% (+/-4.5%) N = 139	94.7% (+/-5.8%) N = 57	84.7% (+/-4.4%) N = 262	80.8% (+/-9.1%) N = 73
		Bachelors & Masters	95.8% (+/-8.2%) N = 24	100% (+/-0%) N = 38	78.4% (+/-11.4%) N = 51	82.8% (+/-9.8%) N = 58

Notes: % indicates the % of present teachers. (+/-%) indicates 95% confidence interval. N is the number of teachers in each category.

Viewing Table #4 from the Morning Absence Study, being an RYT teacher showed a positive and statistically significant effect on being present in elementary schools. When other variables were held constant, being an RYT teacher improved these elementary teachers' attendance by 4-5% depending on the model used. In the Afternoon Absences Study as seen in Table #5, being an RYT teacher had no statistically significant effect on being present in any of the models. When predicting only unexcused, unofficial, or unknown absence types during the Afternoon Absences Study (Table #7), being an RYT Pilot teacher was also not a significant predictor compared to significant factors such as a school's accreditation level and education level.

Table #7: Predicting an Unexcused Absence in the Afternoon

Variables		DV: Unexcused / Unofficial / Unknown Absence
RYT	Pilot Teacher	0.200
Teacher Characteristics	Female	0.255
	Age	**0.039***
	Highest Degree Achieved	0.604
School Characteristics	School Accreditation Level	**-0.720****
	Secondary School	**-0.929***
	Urban	-0.664
Study Day	Monday	0.305
	Tuesday	0.236
	Thursday	**-1.433***
	Friday	0.143
	Constant	**-2.782***
	Observations	441

Notes: Logit coefficients listed with significance levels *** p<0.001, ** p<0.01, * p<0.05. Two-tailed test with 95% confidence interval used. Positive coefficients indicate an increased likelihood of having an unexcused/unofficial absence.

Reviewing the PDOE's teacher timesheets (Table #8), RYT teachers were also found to claim biweekly paycheck hours that were statistically similar to their prior period from 2017. From 2017, the average biweekly paycheck paid out in 2017 was for 77.82 hours compared to 77.77 hours in 2018, and both average payout's confidence intervals overlap suggesting no significant difference in payout hours between years. There was also no statistically significant difference in biweekly paycheck hours between teachers who joined their RYT accounts versus those who did not and by accounts with fewer and greater numbers of account members. Confirming the validity of the absences reported to the RYT system, the biweekly hours reported by teachers with more than one reported absence were significantly lower than those with no reported absences by almost five hours per week. This indicates that there is somewhat of a correlation between absences and the numbers of hours that teachers reported on their timesheets.

Table #8: PDOE Teacher Timesheets

Payout Hours by Year			
	Count of Timecards	Average Payout Hours	95% Confidence Payout Hours
2017	276	77.82	77.23 - 78.40
2018	198	77.77	77.04 - 78.50

Payout Hours by RYT Usage			
		2017	2018 (Pilot)
RYT Teacher Joined Account	NO	77.49	77.56
	YES	78.23	77.00
# of RYT Users on Account	<2 Users	77.56	78.11
	3 to 5	77.81	77.67
	6 to 10	77.61	77.68
	11 to 15	78.57	77.27
	16+	79.00	78.4
# of 2018 RYT Absence Reports	0	77.77	78.32
	>=1	78.22	73.36

However, there were 3 teacher absences out of the 25 RYT reported absences that were identified to have a high likelihood of having been fraudulently reported on 3 teachers' timesheets. These were instances when a reported RYT absence occurred in a biweekly pay period where a teacher claimed to have worked 80 regular hours. These two points of contention cannot logically square up, and with this ability to identify timesheets with hours that do not match RYT reported and confirmed absences, the PDOE and other departments of education can quickly and easily identify potential fraud cases on a large scale to reduce their fraudulent payments.

Pohnpeian community members agreed on the Community Survey and Pre/Post Pilot Student & Parent Survey that RYT improved teacher attendance (Table #9). On the Community Survey people generally agreed with the statement that RYT improves teacher attendance, with students being the most likely to agree. Comparing the Pre/Post Pilot Surveys (Table #10), all respondents' average on the Post Survey indicated that teacher absenteeism is less of a problem in Pohnpei than before the Pilot, and although the average was lower in the Post-pilot Student & Parent Survey, respondents believed that teacher absenteeism hurts children's education at statistically the same amount as before the Pilot.

Table #9: Community Perception of RYT's Impact on Teacher Attendance

	All	Students	Parents	Teachers	School Admin
RYT Improves Teacher Attendance	6.54 (5.82 - 7.26)	7.07 (5.80 - 8.34)	4.85 (2.92 – 6.77)	6.71 (5.59 – 7.84)	6.86 (3.77 – 9.94)
# of Responses	76	28	13	28	7
Notes: Average scores listed out of 10 (1 "Strongly Disagree" to 10 "Strongly Agree"). 95% confidence intervals listed in parentheses. Only includes people who identified their user type.					

Table #10: Pre/Post Change in Perception of Teacher Absenteeism

Question	Average			# of Responses	
	PRE	POST	Change	PRE	POST
Teacher Absenteeism is a big problem in Pohnpei	4.11	3.16	**-0.95*** **	164	178
Teacher Absenteeism hurts children's education	3.43	3.06	-0.36	164	174
Notes: Pre/Post Pilot Student & Parent survey average scores from 1 to 5 (1 being "Strongly Disagree" and 5 "Strongly Agree") listed with higher scores indicating a higher agreement to the statement. *** Significance levels <0.001 using an Anova analysis of variance.					

In conclusion, RYT seems to hold some significant effects on teacher attendance when studied in the morning class times, but no significant effect has been shown for afternoon classes or for unauthorized absences yet. Pohnpei's school communities feel that RYT improved teacher attendance in their schools and that they see teacher attendance as less of a problem now after the Pilot; however, these results are not conclusive. More studies need to be conducted on both time periods (morning and afternoon) including later semesters in the year when it is generally known that teacher efforts begin to fade in their classrooms. With these future studies, RYT can more accurately assess its goal of improving teacher attendance and reducing unauthorized teacher absences.

H_2: Does Raise Your Text Improve Self-Efficacy Towards Education?

Self-efficacy is the belief one has the capacity in bringing about change. H_2 seeks to assess if Pohnpeians' belief that they had the ability to bring about change in Pohnpeian education system improved over the course of the Pilot. To analyze the impact, the following studies will be used: 1) Pre/Post Pilot Parent & Student Survey, 2) Raise Your Text Community Survey, and 3) total reported teacher absences.

The purpose of the Pre/Post Pilot Parent & Student Survey was to measure the change in the sentiments of RYT users, specifically parents and students. This change was measured over a range of questions, amongst which questions 9, 11, 12, and 13 pertain to the issue of self-efficacy.

In Table #11 below, we can see that on holding constant age, gender, and being a student, the change in average responses for the Pre/Post Pilot Parent & Student Survey for questions 9, 11, 12, and 13 are all negative. This means that over the course of the Pilot self-efficacy decreased overall. On a rough analysis, this implies that respondents claimed to have less self-efficacy towards education after the Pilot than before.

Table #11: Impact of Raise Your Text on Self-Efficacy

Measure	Question		Average			# of Responses	
			PRE	POST	Change	PRE	POST
Self-efficacy for Education	Q9	I can impact teacher attendance	4.00	3.34	**-0.66*****	162	174
	Q11	I can improve public educational system	4.08	3.61	**-0.47****	162	172
	Q12	RYT can empower me	4.52	3.65	**-0.87*****	164	172
Opinion of Government Transparency	Q13	Government transparency is important	4.67	4.10	**-0.57*****	164	175

Notes: Anova analysis of variance tests holding constant age, gender, and student status conducted using 95% confidence intervals. Significant differences in the pre/post means are indicated in the "Change" column when respondent status, age, and gender are held constant. Significance levels *<.05, **<0.01, ***<0.001. **RED** indicates a negative outcome for RYT and **GREEN** a positive outcome.

Nevertheless, this does not provide a complete picture. Did a teacher's engagement on their account or the number of users on such account have an impact on respondents' reported self-efficacy?

Table #12: Predicting Self-Efficacy on Post Test Based on RYT Usage

	Q9 "I can impact teacher attendance"	Q11 "I can improve public educational system"	Q12 "RYT can empower me"
Student	-0.059	-0.424	-0.688
Age	-0.016	-0.023	-0.023
Female	-0.361	-0.09	0.049
Teacher on Acct	**.569***	0.342	0.207
# of RYT Users on Acct	**.104***	0.01	**.104****
Constant	**2.98*****	**4.18*****	**3.98*****
Observations	161	159	160
Pseudo R^2	0.07	0.00	0.03
Notes: Linear regression coefficients listed with p-values as * <.05, **<.01, ***<.001. Two-tailed test with 95% confidence interval used. Only post-test responses are included since there were no RYT teacher accounts before the Pilot.			

On running a linear regression analysis, in Table #12, we can see that students' and parents' sentiments were impacted by how much their classrooms and teachers engaged with RYT. Although many of the averages decreased as shown by the Pre/Post Pilot Parent & Student Survey, respondents in teacher accounts with a higher number of RYT users were shown to have higher levels of efficacy than people in teacher accounts with lower engagement as measured by Q9 and Q12. For Q9, the coefficient for the variable # of RYT Users on Acct. is 0.104. Similarly, for Q12, the coefficient for the same variable # of RYT Users on Acct. is 0.104. These coefficients are positive and significant, implying that for each additional RYT User joining a teacher's account that the average self-efficacy of a respondent slightly increases as well.

On the completion of the RYT Pilot, the RYT Community Survey was distributed to measure the effectiveness of RYT Pilot. The efficacy of RYT Pilot was measured using different questions on a scale of 1 to 10, 1 being '*Strongly Disagree*', and 10 being '*Strongly Agree*'. Amongst the 7 questions in the survey, question 6 – '*I feel like I was able to use RYT as a tool to improve teachers' attendance at my school(s)*' – is relevant to assess H_2. Table #13 summarizes the Community Survey, and out of the 79 responses, the average score for Q6 is 6.49 with school administrators having a high average score of 7.

Table #13: Community Survey Self-Efficacy Results

Questions	USER TYPES				
	All	Students	Parents	Teachers	School Admin
Used RYT to Improve Teacher Attendance	6.49 (5.80 - 7.19)	6.71 (5.35 - 8.07)	6.54 (4.71 - 8.36)	6.1 (5.05 - 7.14)	7 (3.75 - 10)
% Signed UP	53%	64%	47%	47%	57%
# of Responses	79	28	13	30	7
Notes: Scores from 1-10. 10 [1 "Strongly Disagree"] - [10 "Strongly Agree"]. Averages listed over their (95% Confidence Intervals).					

An Anova analysis of variance test on the two groups (Yes/No Signed Up) shows a significant difference on respondents' self-efficacy dependent on if they signed up for RYT (Table #14). Not surprisingly, respondents that signed up for RYT were much more likely to feel like they used RYT to improve teacher attendance than the group that did not sign up.

Table #14: Effects of Signing Up for RYT on Self-Efficacy

Question	SIGNED UP	
	NO	YES
Used RYT to Improve Teacher Attendance* **	5.17 (4.05 - 6.28)	7.60 (6.84 - 8.36)
# of Responses	36	43
Notes: Average scores from 1-10. 10 [1 "Strongly Disagree"] - [10 "Strongly Agree"]. Averages listed over their (95% Confidence Intervals). * represents Anova analysis of variance p values done between the two groups (Yes/No Signed Up) predicting the question's outcome. *<.05, **<0.01, ***<0.001		

Over the 11-week RYT Pilot, 25 teacher absences were reported out of which 8 were confirmed teacher absences. While teacher absence reports are not direct measures of self-efficacy towards education, it can be suggested that they serve as indirect measures of the same. The action taken to report a certain teacher absent can only come with the belief in self-efficacy towards making a positive improvement in education.

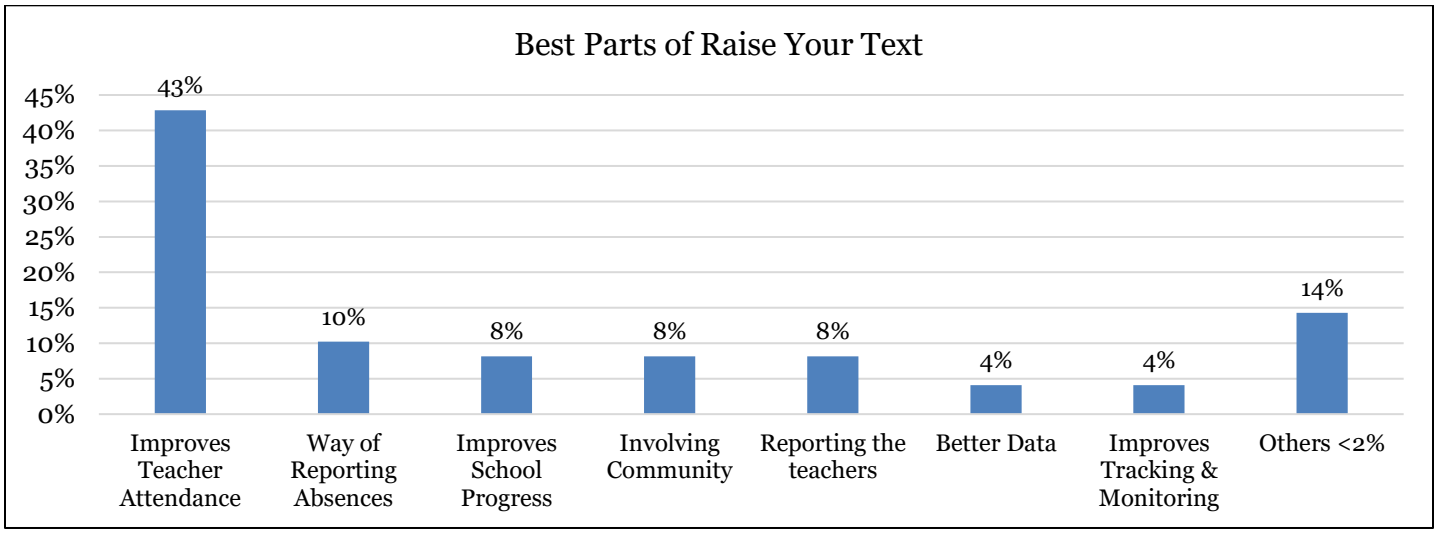
It is suggested that despite a decrease in the average scores from before and after the Pilot on the Pre/Post Pilot Parent & Student Survey, considering all the three types of datasets, students' and parents' sentiments were impacted by their engagement in the RYT Pilot. Respondents who were more engaged in the Pilot saw the benefits of it and thus, felt more empowered and their self-efficacy improved towards education. On the other hand, respondents who did not participate in the Pilot did not see the benefits of the Pilot and were less likely to experience an improvement in self-efficacy towards education.

Thus, it is proposed that while on the surface it seems that RYT Pilot did not increase self-efficacy in education, on a closer analysis, it can be said that the more the stakeholders engaged with RYT, they experienced more self-efficacy towards education.

H_3: Does Raise Your Text Improve School-Community Relationships?

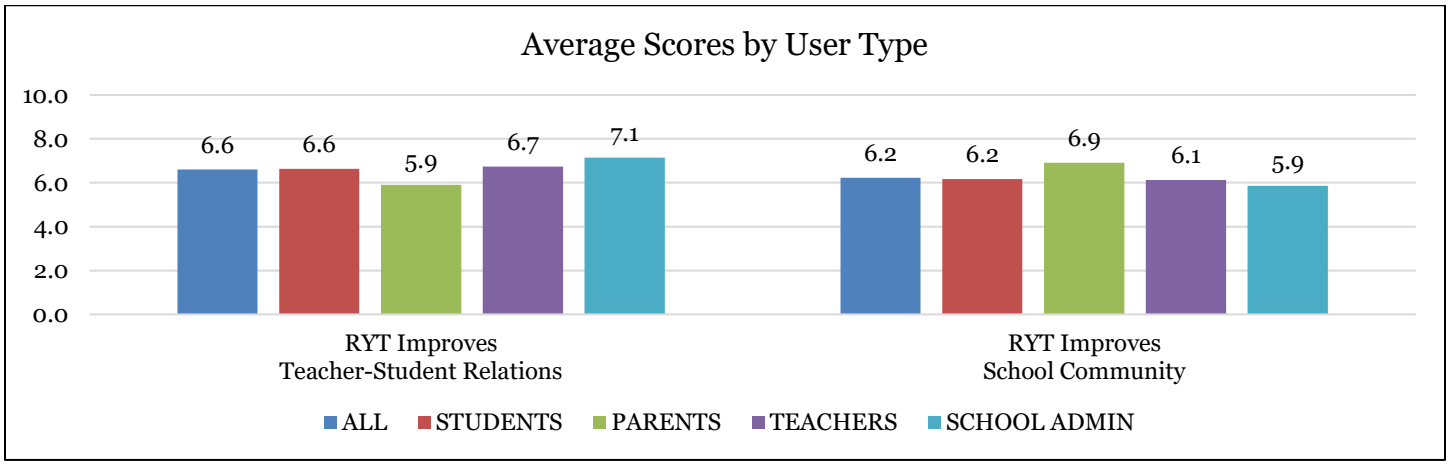
In the Community Survey, a total of 81 responses from students, teachers, parents, and other community stakeholders were received. When asked to describe the best part of RYT, people overwhelmingly responded (43%) with their belief that RYT improves teacher attendance.

Figure #7: Positive Comments for RYT in the Post-Pilot Community Survey



Each question on the Community Survey was assigned a numeric value between 1→10, with 10 as the highest/best value and 1 as the lowest/worst value. Overall, the results were positive (Figure #8). Respondents' averages were above the midpoint (5.5) indicating that most people believed that RYT slightly improved teacher-student relations and the school community overall.

Figure #8: Compiled Average Scores by User Type for the Post-Pilot Community Survey



On conducting a more in-depth study, in Table #15 we can see that if one has signed up for RYT it shows a demonstrable increase in positive perceptions. Individuals who are signed up for RYT are far more

likely to support the program and believe it improves teacher-student relations, the school community, and teacher attendance.

It is possible, then, that RYT has some of the elements consistent with the *Facebook Effect*, i.e. Facebook is a useful social media tool because all your friends are already on there. RYT should ensure that future implementations of the project bring more users onboard to maximize this. With more studies that need to be conducted to accurately examine the full impact of RYT, the RYT team will also need to enhance parental understanding of RYT to increase positive parental perceptions in the other categories.

Table #15: Effects of Signing up for RYT on School Community Improvement

Questions	SIGNED UP	
	NO	**YES**
RYT Improves Teacher Attendance**	5.24 (4.08 – 6.39)	7.53 (6.73 - 8.34)
RYT Improves Teacher-Student Relations**	5.22 (4.12 - 6.31)	7.40 (6.57 - 8.24)
RYT Improves School Community*	5.24 (4.19 - 6.30)	6.72 (5.95 - 7.50)

Notes: Average scores from 1-10. 10 [1 "Strongly Disagree"] - [10 "Strongly Agree"]. Averages listed over their (95% Confidence Intervals). * represents Anova analysis of variance p values done between the two groups (Yes/No Signed Up) predicting each question outcome. *<.05, **<0.01, ***<0.001

H_4: Does Raise Your Text Improve Communication between Teachers & Community Members?

H_4 asks if RYT improved communication between teachers and community members. In the Pre/Post Pilot Parent & Student Survey, question 10 asked, '*I feel connected with my (child's) teacher in that I know what happens at school*'. Keeping age, gender, and student status constant, the average score for Q10 decreased from Pre to Post by -0.27; however, this decrease is not statistically significant (Table #16).

Table #16: Effect of RYT Pilot on Teacher-Community Communication

Measure	Question		Average Score			# of Responses	
			PRE	POST	Change	PRE	POST
Teacher-Community Communication	Q10	Connected & Knowledgeable of School	3.83	3.56	-0.27	163	172
Notes: Anova analysis of variance tests holding constant age, gender, student. Conducted using 95% confidence intervals. Significant differences in the pre/post means are indicated in the "Change" column when respondent status, age, and gender are held constant. Scores range from 1 "Strongly Disagree" – 5 "Strongly Agree"							

On a more comprehensive analysis to see if the number of RYT users on account made a difference in the respondents' sentiments to Q10, Table #17 below shows that the coefficient for the said variable is 0.101 and statistically significant. This indicates that for each additional RYT user, the average score for feeling connected and knowledgeable of their school for individuals in that account increases by 0.101. Thus, the higher the number of RYT users on a teacher account, the more the respondents believed that RYT improved communication between teachers and community members.

Table #17: Predicting Sentiments of Teacher-Community Communication

Variable	**Q10** "I feel connected with my teacher in that I know what happens at school."
Student	-0.221
Age	-0.011
Female	0.456
# of RYT Users on Acct	**.101***
RYT Teacher Joined Acct	**.939****
Constant	**2.52****
Observations	159
Pseudo R^2	0.053
Notes: Linear regression coefficients listed with p-values as *<.05, **<.01, ***<.001. Two-tailed test with 95% confidence interval used. Only post-test responses are included since there were no RYT teacher accounts before the Pilot.	

Substantiating this claim are questions 4 and 5 from the Community Survey. Q4 states, '*Raise Your Text improved how teachers at my school(s) interact with students*', and Q5 asks if, '*Raise Your Text improved the relationship between my school(s) and the local community (communities)*'.

Table #18 illustrates that the average score for all types of users for Q4 is 6.6 and for Q5 is 6.23. While the differences between user types are not statistically significant, all user types' average scores indicated positive responses.

Table #18: How Different RYT Users Perceived School Community Improvements

	USER TYPES				
	All	Students	Parents	Teachers	School Admin
RYT Improves Teacher-Student Relations	6.38 (5.67- 7.10)	6.46 (5.03 – 7.89)	6.15 (4.39 – 7.91)	6.23 (5.20 - 7.27)	7.14 (3.88 - 10)
RYT Improves School Community	6.03 (5.38 - 6.69)	5.96 (4.63 - 7.30)	6.93 (5.51 - 8.35)	5.73 (4.70 – 6.77)	5.86 (3.69 - 8.02)
% Signed UP	53%	64%	47%	47%	57%
# of Responses	78 & 79	28	15 & 14	30	7

Notes: Scores from 1-10. 10 [1 "Strongly Disagree"] - [10 "Strongly Agree"]. Averages listed over their (95% Confidence Intervals). * represents Anova analysis of variance p values of predicting each question's outcomes between user types. *<.05, **<0.01, ***<0.001.

Similarly, in Table #19 we try to see if joining RYT influences respondents' perceptions to Q4 and Q5 of the community survey. For Q4 RYT users had scores that were 1.79 higher than those who hadn't signed up. Correspondingly for Q5, the difference is 0.92 with RYT users having higher sentiment scores as well. On conducting an Anova analysis of variance test between the two groups for both questions, the outcomes are statistically significant indicating that respondents who signed up for RYT are more likely to state that RYT improved the communication and relationships between teachers and community members.

Table #19: How Joining RYT Influences School Community Improvement Perceptions

Questions	SIGNED UP	
	NO	YES
RYT Improves Teacher-Student Relations**	5.21 (4.13 - 6.31)	7.40 (6.57 - 8.24)
RYT Improves School Community*	5.24 (4.19 - 6.30)	6.72 (5.95 - 7.50)
# of Responses	37	42 & 43

Notes: Average scores from 1-10. 10 [1 "Strongly Disagree"] - [10 "Strongly Agree"]. Averages listed over their (95% Confidence Intervals). * represents Anova analysis of variance p values done between the two groups (Yes/No Signed Up) predicting each question outcome. *<.05, **<0.01, ***<0.001

Corroborating the data discussed above are the 6 instances when Pilot teachers used RYT to communicate with 86 NTUs on their accounts. Although this is not a direct evidence supporting H_4,

with the mere fact that Pilot teachers used RYT platform to communicate with their users, it can be suggested that RYT did facilitate better communication between teachers and community members.

Thus, it is suggested that with respect to users and teacher who signed up for RYT, RYT improved communication between the teachers and their respective community members.

Anecdotes

In the Community Survey, the 81 respondents were given the opportunity to write comments. Those comments were categorized and are included below.

Figure #9: Positive Comments for RYT

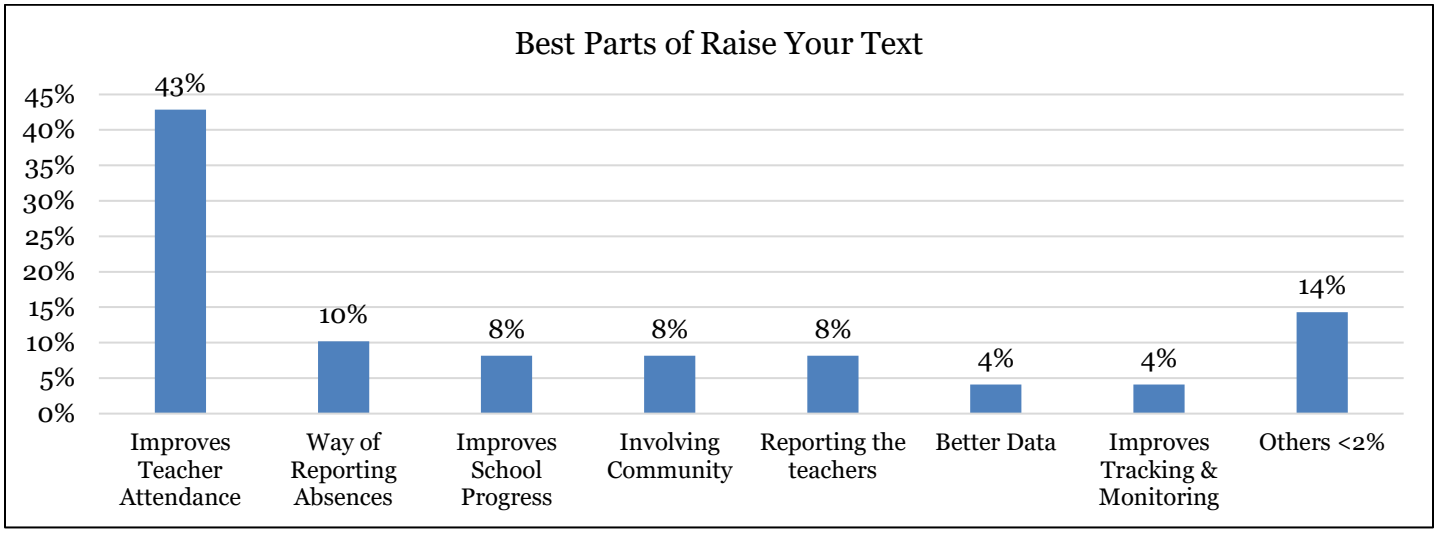
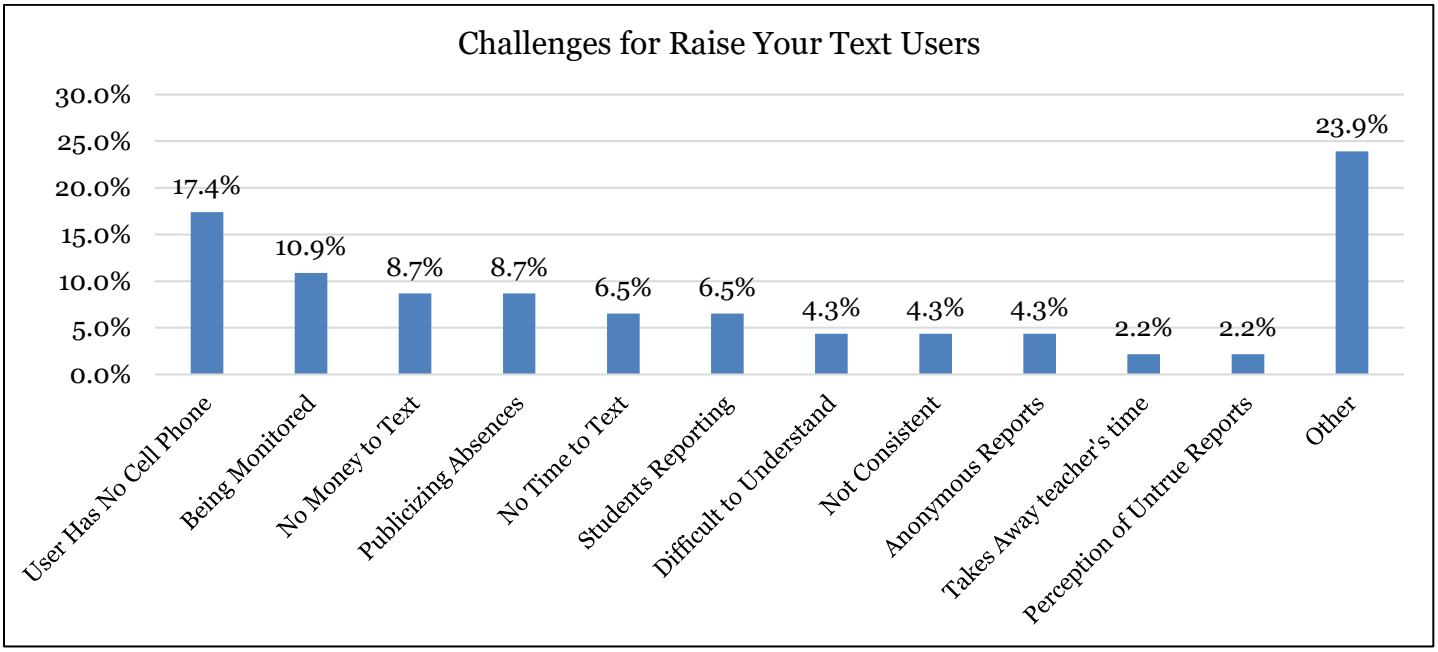


Figure #10: Constructive Comments for RYT



In addition to the Community Survey, several principals, teachers, and students during the Pilot shared anecdotes of their experience with RYT.

Madolenihmw School Teacher Anecdote

An elementary school teacher in the RYT Pilot advised that being part RYT made them think twice about leaving school in the afternoon to travel to Kolonia when there was still a class to teach. The

person also advised that, now that the Pilot is over, they can skip class to go to Kolonia more often. "*I don't need to worry about somebody reporting me anymore*." For this teacher, the impact of RYT is clear. They did not want to be seen poorly by their community nor be punished by the PDOE as a result of someone reporting them as being absent, so the Pilot reduced their willingness to skip class.

Kitti School Teacher Anecdote

At a school in Kitti, not part of the RYT Pilot but visited during the Afternoon Absences Study, a teacher was absent in the afternoon—they left for Kolonia for reasons unknown, abandoning their students to fend for themselves. Teachers at the school shared how that teacher's behavior frustrated them, and how they wanted their school to be a part of the RYT Pilot. If they were part of the Pilot, they could keep all teachers accountable for their attendance.

PICS Student Anecdote

A student at PICS remarked for several minutes after the September morning visit that RYT was useful in keeping their teacher in school. "*She didn't use to come on time*," the student advised, "*But now she does. I have my teacher every day*." For this student, RYT improved their teacher's attendance and allowed that student to have a better chance to learn in school.

Principal Anecdote

A principal at a school not part of the RYT Pilot remarked that the program would be of immense value to them personally and to their school. "*Even me, sometimes I disappear*," they said, "*Sometimes it's for a good reason but sometimes it's because I'm tired. We should all be accountable. Maybe the Central Office can have RYT, too*." This comment of adding PDOE Central Office staff to the program as well was a common comment given by school teachers and administrations to RYT staff due to a perception by school communities that PDOE office staff are frequently absent from work.

Conclusion

Improving the quality of education that public-school students receive is no easy endeavor, and efforts to reduce teacher absenteeism have been shown in the past to make positive improvements to student success. RYT is a system that empowers communities to reduce teacher absenteeism and improve the ways in which information is communicated throughout school communities. The program showed some impacts to reduce teacher absenteeism, but the impacts were not as large (nor pervasive) as was expected, especially for afternoon classes and high schools. Self-efficacy was reported to be lower after the Pilot, but when reviewing the answers by those who signed-up and used the RYT system, many people that could have experienced the positive benefits did not engage enough with the program to do so. Those who signed up for RYT also had better experiences overall with the program reporting that it improved school-community relationships and teacher-community communication. Overall, there was a general Pohnpeian school community support for the project with most respondents saying that the program should continue the project with those who signed up being more likely to have positive opinions of it.[25] The program was also able to demonstrate that it can easily catch potential fraudulent timesheets reported by teachers, and with this ability, departments of education and governments can reduce the total amounts of unearned paychecks on a large scale.

Many parts of the Pilot could have been more impactful towards their intended goals. In the future RYT hopes to reduce the simple and complex barriers to use the system such as reducing the costs of text messages to report/confirm teacher absences and by allowing users to join multiple teachers' accounts instead of just one. Although the system was intended to be simple and easy, it was at times confusing for many in Pohnpei to understand due to difficulties with marketing and technology's penetration into Pohnpeian society. For example, many people did not know that Gmail was email, nor did they know how to send text messages. For this, the program intends to focus intensively on improving the user experience by simplifying product messaging and engagement with all users. The program did build some constructive incentives for teachers to use the RYT system, but in the future, it can be more impactful by creating more positive incentives for teachers to have better attendance that are tied directly to teachers' attendance rates. These positive incentives for good attendance can be as inexpensive as public recognition or as expensive as paycheck bonuses or more school supplies. Essentially, *carrots*, as well as *sticks*, must be used to incentivize all users, especially teachers, to use RYT to benefit their school communities.

Overall, for a project with an operating budget of less than $10,000 for four months and two full-time and one part-time employees, RYT was able to improve awareness and positively impact a difficult problem which many in Pohnpei have been anxious to change for many years. The program gave a voice to parents and students in a society where adherence to authority is not frequently challenged. Very often, users sent in messages that sometimes shocked RYT staff with allegations of teachers abusing students and of school administrators harshly treating their school communities in inappropriate ways. These are issues that have before been swept under the rug, leaving students, parents, and school staff feeling powerless and hopeless to change their communities for the good. Other than RYT, there is no

[25] For more information, view Table #25 in the Annex.

other well-known and anonymous way for people to state their problems with the educational system in Pohnpei.

Communities must first feel comfortable enough to raise their voices to address pervasive problems, and RYT is honored to be a place where people feel comfortable enough to report sensitive problems within their school communities. When the team arrived on Pohnpei, many older generations were caught between nostalgia and anger about their own public education experiences from their pasts. "*Why didn't you start this program when I was in school*," was a common refrain heard by the team, and it shows that more efforts like RYT need to be done to improve FSM's, and other countries', public education systems. We must all fight for accountability, openness, and transparency in education, and RYT hopes to continue to improve the program in FSM and help many students have a better chance at accessing quality education.

Annex

Table #20: List of Raise Your Text Pilot Schools

School	School Level	# of Users	RYT Teachers	RYT Teachers on Accts	Urban / Rural	Confirmed Absences	Absences Reported	Messages Received
Awak	Elementary	31	4	3	Rural	0	0	4
CCA	Both	27	10	5	Urban	2	2	22
ESDM	Elementary	12	4	4	Rural	1	2	22
Mand	Elementary	2	2	0	Rural	0	0	0
MHS	Secondary	34	12	6	Rural	0	1	13
Nett	Elementary	26	16	1	Urban	0	4	11
NMHS	Secondary	46	11	3	Rural	2	6	24
Ohmine	Elementary	98	14	13	Urban	0	1	18
Pehleng	Elementary	11	7	5	Rural	0	0	1
PICS	Secondary	132	25	7	Urban	2	5	47
Pohnlangas	Elementary	7	2	2	Rural	0	0	7
RSP	Elementary	9	2	2	Rural	1	2	10
Seinwar	Elementary	12	6	3	Rural	0	0	5
Sekere	Elementary	25	7	4	Rural	0	2	13
Sokehs Powe	Elementary	5	4	1	Rural	0	0	4
Temwen	Elementary	8	2	1	Rural	0	0	1
16		485	128	60		8	25	202

Table #21: Morning Absences Study – School Selection

	School Selection			
	School	Pilot School	Total Staff Monitored	Pilot Teachers
Day 1 - September 12 Wednesday	Pehleng	YES	6	3
	PICS	YES	30	16
	Lewetik	NO	2	0
	Saladak	NO	9	0
	Sekere*10:30	YES	7	7
	Wone	NO	6	0
	~~Pohnlangas**~~	~~YES~~	~~2~~	~~2~~
Day 2 - September 17 Monday	CCA	YES	5	5
	PICS	YES	19	11
	NMHS	YES	6	3
	Saladak	NO	7	0
	Wone	NO	3	0
	Palikir10:30	NO	5	0
Day 3 - September 19 Wednesday	Nett	YES	24	12
	Seinwar10:30	YES	5	4
	Sekere	YES	9	4
	Rohi	NO	3	0
	Kolonia	NO	14	0
	Lukop	NO	2	0
Day 4 - September 21 Friday	RSP	YES	3	2
	Pehleng10:30	YES	10	7
	Ohmine	YES	26	11
	NMS	NO	4	0
	Palikir	NO	11	0
	Wapar	NO	2	0
Day 5 - September 25 Tuesday	MHS	YES	16	8
	Nett	YES	19	10
	Mand	YES	3	2
	Palikir10:30	NO	10	0
	Saladak	NO	7	0
	~~Salapwuk**~~	~~NO~~	~~1~~	~~0~~
	Sapwalap*	NO	10	0
TOTALS	**21**	**YES (15)**	**283 – (11 wrong) = 272 Teachers**	**105 RYT Teachers**

Notes: 10:30indicates a 10:30 AM measurement. * indicates the changed school that replaced schools that could not be reached because of staffing inability (**).

Table #22: Afternoon Absences Study – School Selection

Days & Schools	ALL	IN PILOT	
		NO	YES
Day 1 (Tues, Oct 23)	**115**	**90**	**25**
Enipein	14	14	0
Kolonia	39	39	0
MHS	27	15	12
NMHS	29	18	11
Temwen	6	4	2
Day 2 (Thurs, Oct 25)	**72**	**57**	**15**
Pohnlangas	7	5	2
Saladak	22	22	0
Seinwar[X]	15	9	6
Sekere	21	14	7
Wapar	7	7	0
Day 3 (Fri, Oct 26)	**127**	**99**	**28**
Enipein[<->]	15	15	0
MHS	27	15	12
Nett	43	27	16
Palikir	26	26	0
Wone	16	16	0
Day 4 (Monday, Oct 29)	**121**	**90**	**31**
Awak	13	9	4
Mand	9	7	2
PICS[<->]	68	43	25
Sapwalap	24	24	0
Wapar	7	7	0

Days & Schools	ALL	IN PILOT	
		NO	YES
Day 5 (Wed, Oct 31)	**112**	**91**	**21**
NMS	10	10	0
Ohmine	43	29	14
Palikir[X]	25	25	0
Pehleng	19	12	7
Wone	15	15	0
Day 6 (Thurs, Nov 1)	**104**	**62**	**42**
CCA[X Report Card Day]	24	14	10
MHS	27	15	12
Pehleng	19	12	7
Sekere	15	8	7
Sokehs Powe	13	9	4
Temwen	6	4	2
Total Obs. Planned	**651**	**489**	**162**
Total Obs. Done	**496**	**351**	**145**

Notes: [<->] Switched days.
[X] not able to be observed due to staffing difficulties.
[X Report Card Day] Not able to observe due to report card day.

Table #23: Descriptive Statistics of Afternoon Absences Study

	VARIABLES	All Teachers					Pilot Teacher (NO)		Pilot Teacher (YES)	
		Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Obs	Mean
RYT Pilot	Pilot School	651	0.66	0.47	0	1	489	0.55	162	1
	RYT Teacher	651	0.25	0.43	0	1	489	0.00	162	1
Absences	In Class	347	0.87	0.34	0	1	231	0.87	116	0.87
	In School (Easy)	481	0.86	0.34	0	1	338	0.87	143	0.85
	In School (Harsh)	496	0.84	0.37	0	1	351	0.84	145	0.83
	Unofficial/Unknown Absence	496	0.11	0.31	0	1	351	0.10	145	0.12
Teacher Info	Was able to be Observed	651	0.76	0.43	0	1	489	0.72	162	0.90
	Female	623	0.57	0.49	0	1	474	0.59	149	0.54
	Age	575	40.91	9.47	19	70	433	40.80	142	41.3
	Teacher's Highest Degree Achieved	563	2.22	0.52	0	4	425	2.15	138	2.4
School Info	School Accreditation Level	651	2.82	0.95	1	4	489	2.88	162	2.64
	Secondary School	651	0.29	0.44	0	1	489	0.23	162	0.48
	Urban	651	0.33	0.47	0	1	489	0.31	162	0.40
RYT Pilot Usage	# of RYT Users on Teacher Account	162	4.52	3.92	1	29	n/a	n/a	162	4.52
	RYT Teachers Joined RYT Account	162	0.47	0.50	0	1	n/a	n/a	162	0.47
	RYT Reported Teacher Absences	162	0.15	0.52	0	4	n/a	n/a	162	0.15
Day of Observation	MONDAY	651	0.19	0.39	0	1	489	0.18	162	0.19
	TUESDAY	651	0.18	0.38	0	1	489	0.18	162	0.15
	WEDNESDAY	651	0.17	0.38	0	1	489	0.19	162	0.13
	THURSDAY	651	0.27	0.44	0	1	489	0.24	162	0.35
	FRIDAY	651	0.20	0.40	0	1	489	0.20	162	0.17
Best Guess Absence Reason	Funeral	3	0.01	0	0	1	2	0.01	1	0.01
	Late from Lunch	3	0.01	0	0	1	2	0.01	1	0.01
	Left Early	2	0.00	0	0	1	2	0.01	0	0.00
	Left Early for Kolonia	5	0.01	0	0	1	5	0.01	0	0.00
	Medical Reason	3	0.01	0	0	1	1	0.00	2	0.01
	Official PDOE Meeting	9	0.02	0	0	1	7	0.02	2	0.01
	On Leave	1	0.00	n/a	0	1	1	0.00	0	0.00
	Sick	5	0.01	0	0	1	4	0.01	1	0.01
	Taking Classes at College	5	0.01	0	0	1	5	0.01	0	0.00
	Unknown	44	0.09	0	0	1	27	0.08	17	0.12
	All Types	80	0.16	0	0	1	56	0.16	24	0.17

Table #24: Pre-Post Pilot Parent & Student Survey

Measure	Question		Average			# of Responses	
			PRE	POST	Change	PRE	POST
Demographics	Q1	Student	73%	80%	0.07	164	176
	Q2	Age	20.79	19.40	-1.39	162	171
	Q3	Female	54%	55%	0.02	165	175
Scope of Teacher Absenteeism	Q6	Teacher Absenteeism is a big problem	4.11	3.16	**-0.95*** **	164	178
	Q7	Teacher Absenteeism hurts children's education	3.43	3.06	-0.36	164	174
	Q8	Teachers are frequently absent	1.95	2.13	0.18	158	175
Self-efficacy for Education	Q9	I can impact teacher attendance	4.00	3.34	**-0.66*** **	162	174
	Q11	I can improve public educational system	4.08	3.61	**-0.47** **	162	172
	Q12	RYT can empower me	4.52	3.65	**-0.87*** **	164	172
Opinion of Government Transparency	Q13	Government transparency is important	4.67	4.10	**-0.57*** **	164	175
Teacher-community Communication	Q10	Connected & Knowledgeable of School	3.83	3.56	-0.27	163	172
Public Perception of RYT Program	Q14	I like RYT	n/a	3.47	n/a	0	171
RYT Classroom Internal Data	n/a	# of RYT Users on Teacher's Classroom	n/a	5.24	n/a	154	173
	n/a	Teacher Joined RYT Account	n/a	74%	n/a	154	173

Notes: Anova analysis of variance tests holding constant age, gender, student, # of RYT users on account, and "Teacher joined RYT Account" conducted using 95% confidence intervals. Significant differences in the pre/post means are indicated in the "Change" column when respondent status, age, and gender are held constant. Significance levels *<.05, **<0.01, ***<0.001. **RED** indicates a negative outcome for RYT and **GREEN** a positive outcome.

Table #25: Post-Pilot Community Survey Results by User Type

Questions	All	USER TYPES			
		Students	Parents	Teachers	School Admin
Understands RYT*	6.58 (5.94 - 7.22)	7.73 (6.68 - 8.78)	4.79 (3.09 - 6.48)	6.38 (5.45 - 7.31)	7 (3.84 - 10)
Supports RYT	6.71 (6.06 - 7.40)	6.82 (5.67 - 7.96)	5.69 (4.03 - 7.35)	6.69 (5.67 - 7.71)	8.29 (5.14 - 10)
RYT Improves Teacher Attendance	6.52 (5.80 - 7.23)	7.07 (5.80 - 8.34)	4.85 (2.92 – 6.77)	6.71 (5.59 – 7.84)	6.86 (3.77 – 9.94)
RYT Improves Teacher-Student Relations	6.38 (5.67- 7.08)	6.46 (5.03 – 7.89)	6.15 (4.39 – 7.91)	6.23 (5.20 - 7.27)	7.14 (3.88 - 10)
RYT Improves School Community	6.03 (5.39- 6.69)	5.96 (4.63 - 7.30)	6.93 (5.51 - 8.35)	5.73 (4.70 – 6.77)	5.86 (3.69 - 8.02)
Used RYT to Improve Teacher Attendance	6.49 (5.80 - 7.19)	6.71 (5.35 - 8.07)	6.54 (4.71 - 8.36)	6.1 (5.05 - 7.14)	7 (3.75 - 10)
RYT Should Continue	7.06 (6.40 – 7.73)	7.11 (5.85- 8.37)	7.21 (5.46 – 8.97)	6.70 (5.66 – 7.73)	8 (4.84 - 10)
% Signed UP	53%	64%	47%	47%	57%
# of Responses Total (Not per question)	81	28	15	30	7

Notes: Scores from 1-10. 10 [1 "Strongly Disagree"] - [10 "Strongly Agree"]. Averages listed over their (95% Confidence Intervals). * represents Anova analysis of variance p values of predicting each question's outcomes between user type. *<.05, **<0.01, ***<0.001.

Table #26: Effects of Signing Up for RYT on School-Community Improvement

Questions	**SIGNED UP**	
	NO	**YES**
Understands RYT	5.94 (4.88 - 7.01)	7.09 (6.31 - 7.87)
Supports RYT*	5.88 (4.84 - 6.94)	7.37 (6.59 - 8.15)
RYT Improves Teacher Attendance**	5.24 (4.08 – 6.39)	7.53 (6.73 - 8.34)
RYT Improves Teacher-Student Relations**	5.22 (4.13- 6.31)	7.40 (6.57 - 8.24)
RYT Improves School Community*	5.24 (4.19 - 6.30)	6.72 (5.95 - 7.50)
Used RYT to Improve Teacher Attendance***	5.17 (4.05 - 6.28)	7.60 (6.84 - 8.36)
RYT Should Continue***	5.70 (4.51 – 6.90)	8.26 (7.78 - 8.74)
# of Responses Total (Not per Question)	38	43

Notes: Average scores from 1-10. 10 [1 "Strongly Disagree"] - [10 "Strongly Agree"]. Averages listed over their (95% Confidence Intervals). * represents Anova analysis of variance p values done between the two groups (Yes/No Signed Up) predicting each question outcome. *<.05, **<0.01, ***<0.001

Figure #11: Mobile Phone Confirming an Absence Report

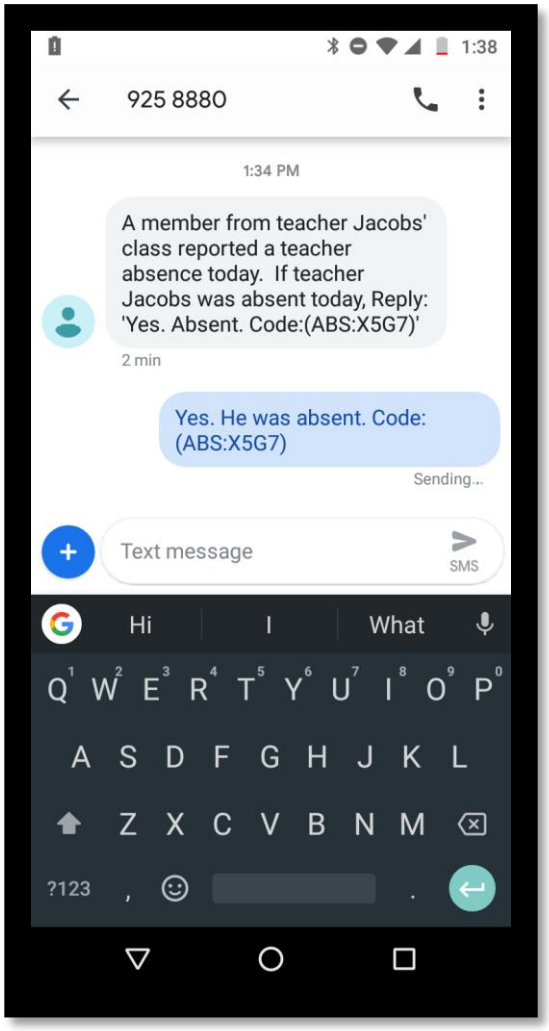


Figure #12: Raise Your Text Online Reports