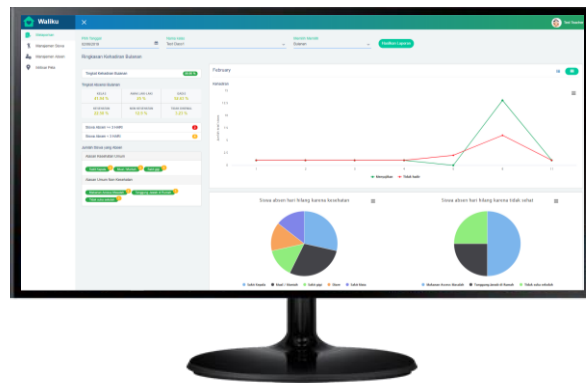




Waliku Pilot Year Results 2019-2020 Academic Year



Introduction

Waliku, or “my guardian” in Indonesian, is a solution to help ensure that every child attends school to learn and achieve their fullest potential. Waliku aims to address challenges faced by school-communities in low resource contexts, by recognizing and acting on critical student absences- whether from illnesses or social threats- in a timely manner. Using a suite of tools, Waliku digitizes and simplifies daily tasks of schools such as managing the school population, communicating with parents/guardians, linking with referral services, and reporting to school districts. Waliku’s aim is to improve student well-being and reduce chronic absenteeism and dropout of the most marginalized children (Figure 1).

Waliku’s proof-of-concept was implemented in Sumba Barat, Indonesia over the 2018/2019 academic year, across five schools and 48 classes to cumulatively reach 1,210 students. Over the year, Waliku’s app for absence recording was iteratively developed and tested with teacher-users. Key outcomes of interest were Waliku’s usage rates and understanding of student absenteeism. Waliku was adopted by all teachers, with an overall daily usage of 57%, and 68% when at least one class took attendance. This adoption provided ready data on the extent of student absenteeism, by health, social reason, gender, and child.

The positive outcome from our proof of concept study allowed us to initiate a collaboration with the Sumba Barat district education office for the 2019/2020 academic year. We piloted Waliku across 21 schools and 215 classes, to reach 5,754 students (3,114 boys and 2,640 girls) . The pilot took place over a duration of six-months, from October 2019 to March 2020, when schools closed due to COVID-19. The objective of the pilot year was to improve Waliku’s uptake at three levels:

- District: Designing Waliku to address local needs and create ownership of the system.
- School: Increasing school ownership and capacity for using digitized absence data to influence school-level decisions.
- Classroom: Providing teachers with an efficient tool for their daily tasks on absence tracking, connecting with parents and following up of chronically absent students. Parents/guardians are linked with a referral service and report to the school districts. Waliku’s aim is to improve student well-being and reduce chronic absenteeism and dropout of marginalized children.

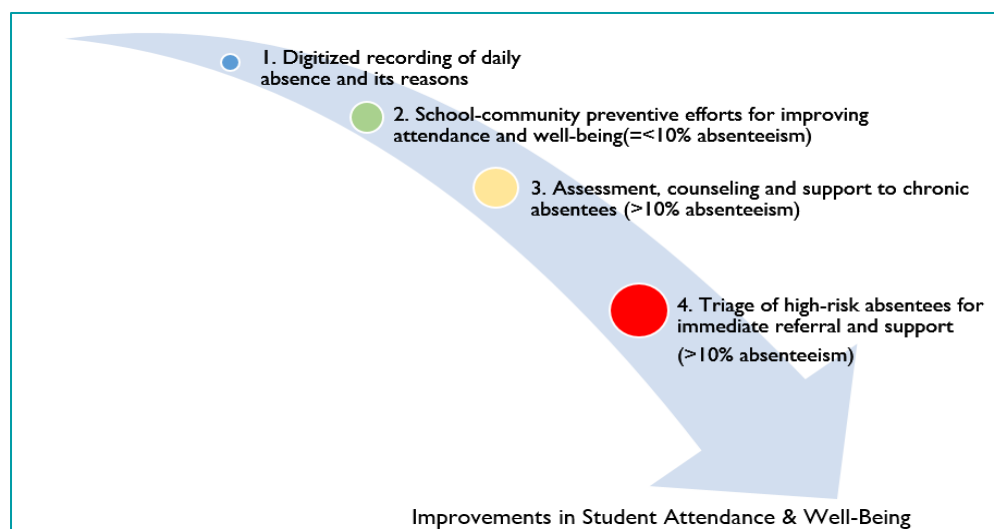


Figure 1 Key Objectives of Waliku

Pilot Year Activities and Outputs

The Waliku team has followed a systematic approach and socio-ecological model working directly with district officials, school administrators and class teachers to positively impact student attendance and well-being. Each stakeholder plays an important role with regards to children's education and in supporting their communities to meet social development goals. We completed the following activities with stakeholders at district, school and class level in the 2019/2020 pilot year. Interactions with parents and children happened indirectly, through teachers and school administrators.

District-Level

- Collaborated with the District Education Office (DEO) to identify 16 new schools to introduce Waliku. The new schools were from the semi-urban sub-district of Waikabubak. These were in addition to the original five schools from the rural district of Wanukaka.
- Signed a Technical Agreement with the DEO to increase coverage of Waliku to 21 schools. The agreement outlined primary responsibilities of the DEO, schools, and the Waliku team.
- Hosted an orientation and training for DEO staff as co-trainers for school-level trainings. The DEO staff consists of district supervisors whose role is to routinely monitor access and quality of education and facilities in schools.
- Worked with the DEO for spot checks on Waliku's usage during monthly visits to schools. We also facilitated four review meetings with the district and school administrators. During these meetings, our team provided updates on the project and discussed results of Waliku's use in school with district and school officials.
- Designed and developed Waliku's version 2 mobile and web application for teachers and school administrators, based on user needs. Designing version 2 was an iterative process of the team collecting user stories to understand their needs, drafting designs, seeking user input and revising those designs before engineering a sustainable solution (see Box 1).

In developing version 2 of the Waliku system, we continued to use human-centred design methods to achieve our goals; we focused on the users (teachers, school administrators and the District Education Office/DEO) to understand their needs. We analysed user needs to source opportunities that could frequently integrate Waliku within their daily workflows. First, we conducted one-on-one interviews with DEO staff and members of Waliku's field team, as well as field observations of approximately 10 schools in Waikabubak and Wanukaka. This informed us of the gaps and opportunities in our system and how we could better design version 2. Further, we conducted focused group discussions with school supervisors from the District Education Office to gather feedback on version 2 prototypes and features. Lastly, we organized a workshop for principals and IT operators in March 2020 to gather perspective and feedback as users of the version 2 design. Key modifications made to the Waliku app, based on user feedback, include: a) a teacher attendance-tracking feature for school administrators; b) monthly reports in a format that is ready for submission to the district for school attendance monitoring; c) recording reasons for removing students from schools; and d) stronger offline functionality.

Box 1: Designing Waliku Version 2



Figure 2: Review meeting at the DEO office, led by the DEO.



Figure 3: Workshop with district staff and school administrators for version 2 development.

School-Level

- Developed a standardized online and offline training package for school-level officials. The training includes both use of Waliku applications, as well as standard daily, weekly and monthly workflows for school-based management of absenteeism. These were then discussed and locally adapted during school trainings.
- Trained school principals and IT operators on Waliku's school administrator Web App and Dashboard. Ten schools were trained for the first semester and 11 schools were trained for the second semester from January 2020. Forty-two administrators – 20 principals and 22 operators were trained in total. Of the 40 participants who took the post-test evaluation, 30 (75%) showed improvement in their knowledge of usage. The trainers continued to coach after the training, during school visits and through regular communications via a WhatsApp group. The latter was also used by IT operators as a symbiotic learning system.
- IT Operators remained a crucial and viable point of contact for the Waliku team. This ensured effective communication regarding both the school's daily usage, and the challenges associated with using Waliku. The team provided direct troubleshooting and technical support to the IT operators, who then assisted their teachers in accomplishing their daily absence management tasks on Waliku.

Class-Level

- Teacher trainings for each sub-district took place in four batches of up to 30 participants. The trainings were over a three-day period in September and again in December, for schools who inaugurated Waliku in Semester 1 and Semester 2, respectively. The trainings provided an overview of Waliku and smartphone usage as a precursor to detailed sessions on workflows for absence management and use of the teacher app. In total 197 teachers were trained on Waliku. In accordance with Save the Children standards, we trained all teachers (including administrators and supervisors) in child safeguarding and protection. We followed Save the Children's quality benchmarks for training events, and ensured we assessed all participants before and at the end



of the workshop. Of the total 185 teachers who took the pre/post test, we saw knowledge gains in 127 (69%) participants.

- We worked with teachers to jointly develop their weekly and monthly workflows to follow up on unknown absences and chronic/ severely chronic absentees.
- We provided regular feedback to teachers on their daily, weekly and monthly use of Waliku in addition to their monitoring processes on absenteeism. Feedback was provided through three methods: communication through operators, collaborative spot check visits with school supervisors, and purposive visit to low performing schools.

Outcomes

District-Level

The DEO of Sumba Barat was an active supporter of Waliku throughout its pilot year. The DEO allocated four staff members for Waliku's pilot implementation and actively participated in all meetings between Waliku and stakeholders at the school level. The DEO secretary promoted Waliku as their innovative project at the provincial annual development meeting and published a [news story](#) of Waliku on their website. The DEO budgeted for the expansion and implementation of Waliku in 13 more schools for the 2020-21 Academic Year. The DEO also requested for a Waliku district dashboard to monitor absenteeism across all schools within the district. This will be developed in preparation for the 2020-21 Academic Year.



Figure 4: Waliku field team with district education office staff

School Level

We reached 4,638 children (2,513 boys, and 2,125 girls) in the semi-urban district of Waikabubak and 1,116 children (601 boys and 515 girls) in the rural district of Wanokaka through Waliku¹. Waliku significantly improved school administrators' knowledge in terms of absenteeism. Compared to paper-based attendance systems, principals had ready data of the main reasons for student absences on their monthly dashboard. With this data, they were able to easily identify students who were chronically and/or severely chronically absent. Principals utilized Waliku's data as a source of information for meetings with teachers, to further determine follow up actions with regards to absent students.

“Before Waliku, we never paid much attention to absence details, we knew how many students were absent due to sickness, social reasons or unknown, but we did not have the details of each reason. Particularly, for tracking students with potentially high risk absences where they have missed many days out of total effective days. With Waliku, now we are able to identify these potentially high-risk students and pursue quick follow-up action on them.” (Principal of SDN Dede Kadu).

¹ Student reach count includes boys and girls who were enrolled in school for at least one month (21 days).

School administrators also used information on the most common reasons for absence, to promote specific messages of protecting children and encouraging them to attend school.

“With Waliku, we can gather the details of why children are absent. In my school, I discovered that many children were absent due to farming. Based on this data, I met the village head who pursued outreach to locals about taking children to farms during school hours.” (Principal of SDN Praigaga 2)

Waliku also reduced the paperwork burden for school administrators and operators by providing downloadable monthly attendance records; these records were used by some schools for submitting monthly reports to the DEO. The DEO found the reports a useful reference during school visits.

“One of our items in the supervision checklist is to monitor students’ attendance and absenteeism rate. Waliku has made it easy for school administrators to report to us. We can also use it during class supervision with teachers by monitoring attendance rates in his/her class.” (School Supervisor in Waikabubak Sub-District)

School administrators used Waliku’s management functions such as adding new students and teachers, deleting students and teachers who left the schools and marking the calendar for school holidays. School administrators also helped troubleshoot whenever teachers had issues with using the teacher mobile app and reminded them to take attendance daily.

“As operators, we were trained on operating the Waliku App for teachers. When teachers face issues with the app, we are able to help them. The Waliku team provided us with short videos on our WhatsApp Group whenever we have faced challenges, this way, we can just simply forward the videos on to our group of schools. (Operator SDM Lahi Hagalang)”

Class-Level

Waliku Usage

Due to the active support of school administrators, it was possible to implement Waliku across all 21 schools. Waliku’s daily usage (Figure 5) across 215 classrooms was 82% over the academic period. The figures for the semi-urban area of Waikabubak were 87% higher than rural Wanokaka, at 70%.

The rural schools continued to face challenges with implementation and network connectivity. Even so, the daily usage in the five Wanokaka schools has increased by 13% when compared to the proof-of-concept year. Aside from December, when schools had examination days and irregular attendance taking, Waikabubak schools consistently exceeded the Waliku target-use of 80%. Thirteen schools had daily usage rates greater than 80% for

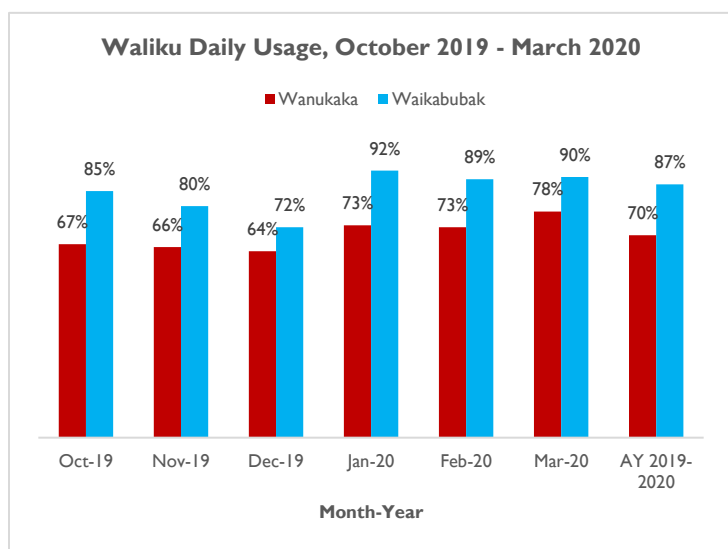


Figure 5: Waliku daily usage from October 2019-March 2020.

three consecutive months, indicating they were ready to transition entirely to a digitized attendance system. We used 80% daily usage as our benchmark for school readiness to go completely digital with Waliku.

Absence Follow-Up

Teachers attempted follow up on 75% of absences and recorded them as either due to a health (31%), non-health (18%) or unknown reason (26%). The key differences in the follow-up of absences between Wanokaka and Waikabubak schools were the latter having higher follow-up rates (78% versus 69%) and known absences (55% versus 34%).

Despite their lower comparative rates, the five Wanokaka schools had improved follow-up of absences from the previous year by 6%. The extent of follow-up of very absent students (those absent >3 consecutive days) versus students absent for shorter periods was similar, indicating that teachers were not specifically more responsive to very absent students. This will be a key indicator for assessing Waliku in the upcoming academic year.

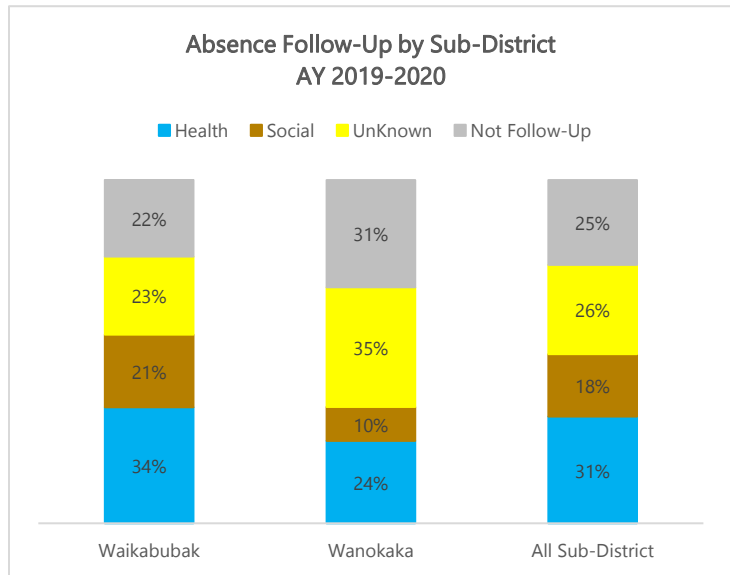


Figure 6: Absence follow-up by Sub-District

Absence Informer

The informer of over half the absences that were followed up (52%) were parents or other adults; similar for both Waikabubak and Wanokaka. Wanokaka had a higher percentage of the absent child as informer of absence than Waikabubak: 14% versus 3%. Notably there was an increase in the percentage of absences reported by adults compared with the previous year in Wanokaka: 51% versus 33%.

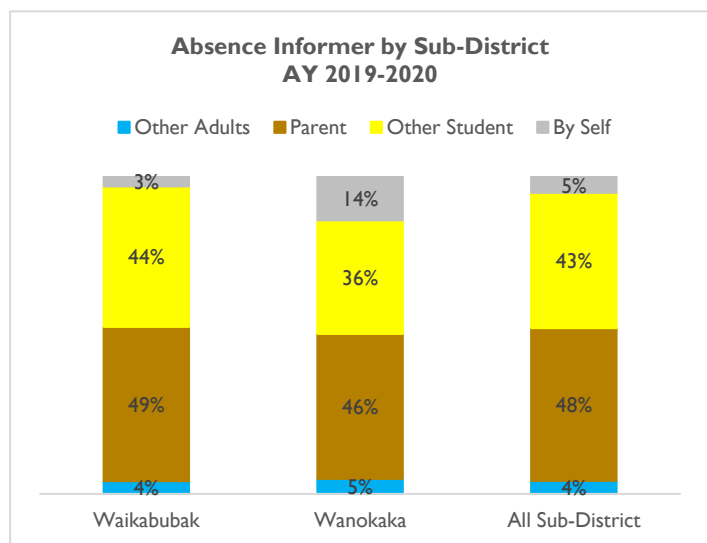


Figure 7: Absence informer by Sub-District

Absenteeism Rates

Teachers had access to the daily, weekly and monthly absence reports for their class, categorized by gender, student, and reason. They used this information to follow up on chronically absent students.

In both districts, the student absenteeism rate was 10% or lower across all months: overall 6% in Waikabubak and 8% in Wanukaka. In comparison with Year I, overall absenteeism in Wanokaka was lower by 3%. Through the reporting period, boys had a higher absenteeism rate than girls in both districts. These findings were similar to those in Year I and highlighted the need to focus more on absenteeism, among boys, and its underlying causes.

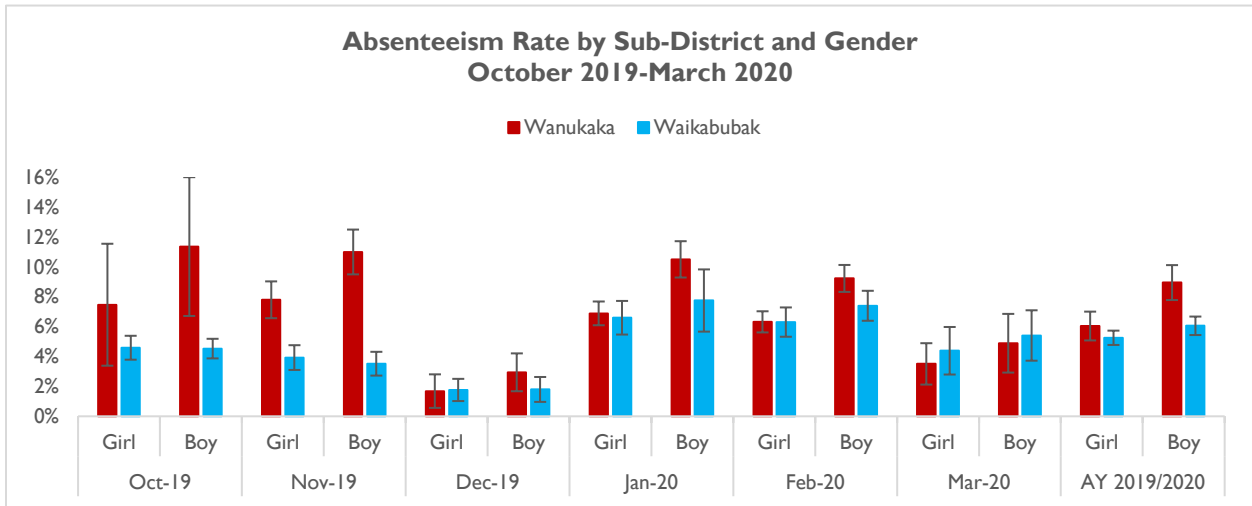


Figure 8: Absenteeism rate by sub-district and gender.

The percentage of chronically (>10-20%) and severely chronically (>20%) absent students was 19% overall; 24% for Wanokaka and 18% for Waikabubak. This percentage was less than expected and potentially due to a shorter academic year. In Year I, the percentage of chronically and/or severely chronically absent students from one school in Wanukaka was 29% and 8%, respectively. Waliku also identified 217 students – 198 from Wanukaka and 19 from Waikabubak – who left school mid-year. As the system did not capture the reason for removing students from their rosters, it was not clear if they were transferred, dropped out, graduated or died. The next version of Waliku will track and record this information.

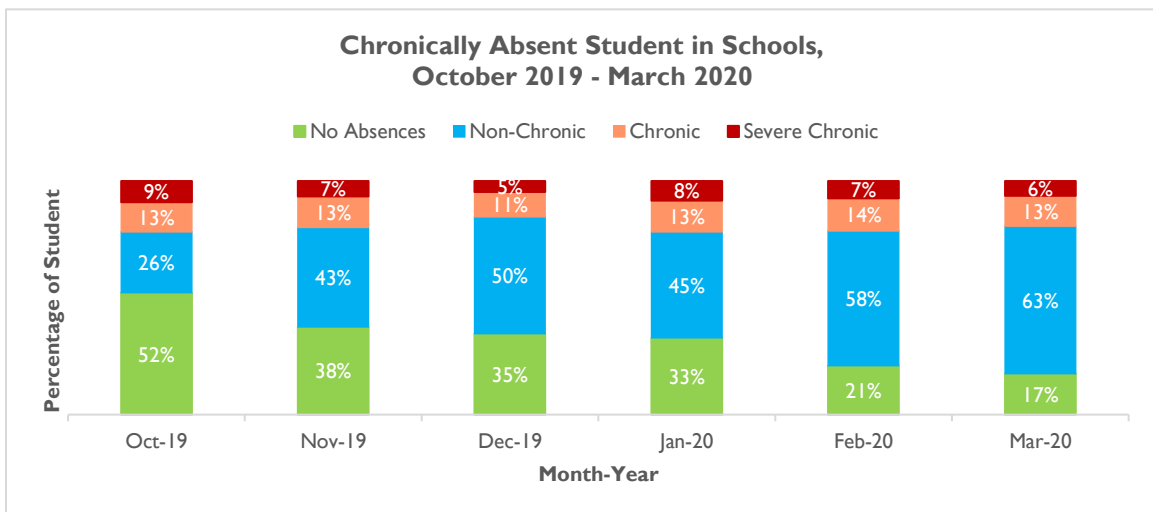


Figure 9: Percentage of chronically absent students in school.

Absence Reasons

Health-related absences accounted for 63% of recorded reasons. Notably, fever accounted for most health-related absences (45%), then cough (17%), headache (13%) and injuries (7%) constituting the other major health-related categories when looking at both sub-districts. The predominance of fever as the leading cause of absence was especially prevalent in the more semi-urban area of Waikabubak, where fever accounted for 48% of absences (compared to 32% in Wanokaka).

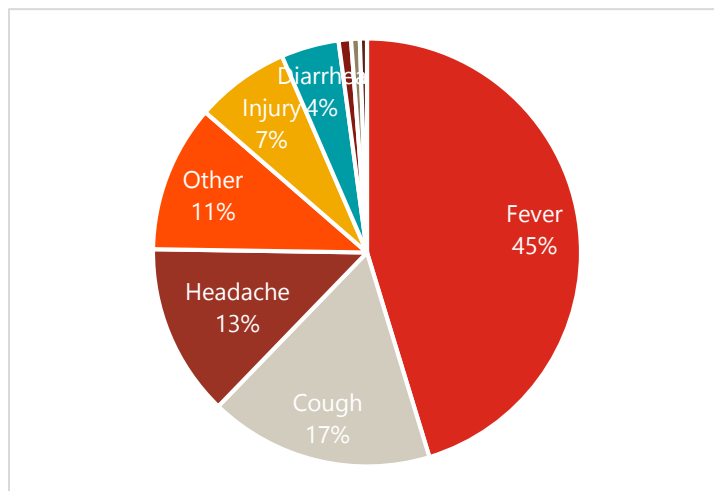


Figure 10: Health-related absences.

The current health findings motivate the need to develop assessment tools for schools, teachers and the local health clinics, to target reasons for absence. This can allow for triage of very sick children, based on a combination of reasons. For example, if a teacher gathers information that a child is absent due to a headache associated with fever (a potentially dangerous combination) the tool can immediately prompt them to recommend a referral to a clinic, as opposed to headache without fever, which could potentially be observed at home. With an improved assessment tool to better clarify absence reasons, teachers can also accurately target interventions for specific health burdens among students.

Social causes of absenteeism ranged from farm work (39%), cultural events (31%) and motivational issues (18%), where children or parents of children cited their dislike of school as their reason for not attending. Interestingly, farming/outdoor work constituted a larger proportion of absences in the semi-urban area of Waikabubak (40%) compared to the rural Wanokaka (36%). However, another 8% of absences in Wanokaka were reported to be from household responsibilities, compared to 5% in Waikabubak.

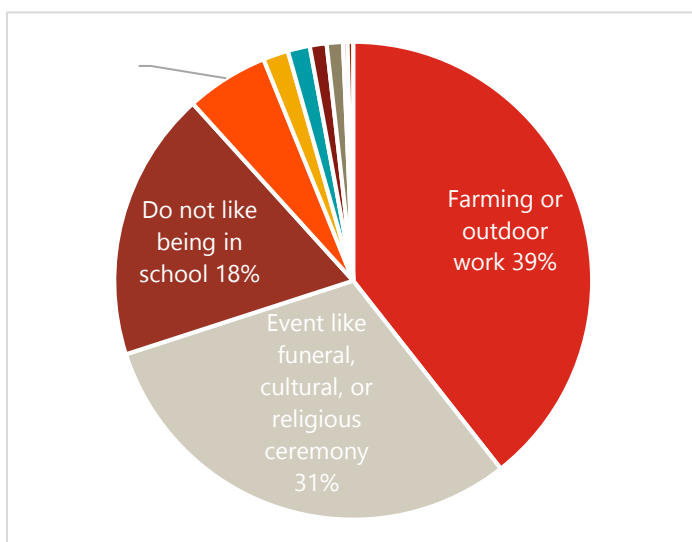


Figure 11: Social causes of absenteeism.

Predictably, weather and transportation were more of an issue in Wanokaka (5%) compared to Waikabubak (3%) although neither were significant contributors to absences overall. A concerning number of students reported motivational issues leading to absenteeism, especially in Wanokaka, where 25% of students cited disliking school/class as the underlying reason for their absence.

Conclusion and Next Steps

We were successful in our 21-school pilot of Waliku in the 2019-20 academic year. Use of Waliku and follow-up of absences was higher than in the proof-of-concept year, and we noted improved understanding of absences and their aetiologies. There was greater communication between teachers and parents over student absences and overall, lower rates of absenteeism than the first year.

While these results are encouraging- in terms of being able to largely impact student attendance and wellbeing- it is important that Waliku is implemented across *all* schools in a district. This will be especially true in a post-COVID-19 context, when schools can expect to see variability in student attendance over a prolonged period. School districts will need tools like Waliku to monitor and remediate absenteeism. Our key priorities and objectives for 2020-21 academic year are as follows:

- Introduce Waliku Basic (version 2) to the existing 21 schools and to 13 new schools in Sumba Barat at the start of the academic year. Utilize methodologies such as online tutorials and training content that encourage self-directed learning, given restrictions of in-person gatherings due to COVID-19.
- Develop a low-tech Waliku BOT and introduce this across the remaining schools of Sumba Barat at the start of the academic year. This solution will allocate more time to introduce the Waliku Basic in more schools, while still providing school and district management an interim solution to track and respond to trends in school absenteeism.
- Improve the Waliku Basic solution to include a district dashboard and a dynamic tool that can assess child illnesses and injuries.
- Connect with other parts of the ecosystem surrounding school children – local clinics and child welfare services- and develop solutions that increase coordination and prompt referrals as a response.
- Expand Waliku’s use to new geographies and contexts serving additional marginalized student populations that require interventions for improving school access. We are currently exploring opportunities for introducing Waliku Basic and Waliku BOT in two other countries.

To actualize the listed priorities above, we will need a new operating model. As a small-scale project that relies on donor funding, we plan to transition to a dedicated unit/social venture of Save the Children that can receive funding from donors, as well as generate revenue from clients that use the Waliku solution. The latter will include governments, NGOs and institutions that wish to use Waliku to track and respond to absenteeism or to monitor the outcome of their interventions on absence reduction. Such a model will provide Waliku with resources to improve and optimize our solution for low-resource contexts, segment our offering for different use-cases and expand our reach outside Save the Children-supported communities. The creation of a Waliku unit will be a priority for the upcoming year.