

Chile: Universal Collection, Open Access, and Innovation in the Use of Attendance and Absenteeism Data

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Abstract: In Chile, attendance is recognized as an important component of school quality and educational equity. The Chilean education system has clear, standardized definitions that apply country-wide, and a good registration system for school attendance that compiles national databases containing student-level, daily attendance, absences, and withdrawals for all children attending public schools. Moreover, these data are publicly available via open access, which allows the entire education community and the Ministry of Education access to all schools' data in an organized, centralized manner. These data contribute to ongoing scholarship about the impacts of attendance and absenteeism on education outcomes. In practice, schools use attendance data to monitor progress toward goals. The Ministry of Education uses data to calculate and pay school subsidies that are linked directly to average monthly attendance in accordance with Chilean law, and to classify schools into categories of education quality. Chilean Fundación Educacional Oportunidad uses attendance data and continuous quality improvement methods to promote attendance and prevent chronic absenteeism with more than 150 schools via a regional Learning Network. Meanwhile, the Learning Network fills an important gap by repurposing the nationally reported data to calculate and focus on individual-level attendance and by creating opportunities for practitioners to learn together how to promote attendance and prevent chronic absenteeism. This paper describes the context of Chile and its educational system; the definition, recording, reporting and use of attendance data; and the methods, outcomes and lessons learned by the regional Learning Network.

Keywords: absenteeism, Chile, attendance data, preschool education, quality improvement

In Chile, school attendance and absenteeism are part of national conversations about educational equity: absenteeism rates are high, and chronic absenteeism has been shown to diminish the impacts of interventions that improve classroom quality. For students matriculated in public schools from preschool through secondary education, teachers record attendance daily, and schools submit data monthly to the Ministry of Education (Ministerio de Educación, MINEDUC). MINEDUC compiles and publishes on its website national databases that contain student-level, daily attendance, absences, and withdrawals for all children attending public schools. MINEDUC uses attendance data as a performance metric tied to school financing. Chilean Fundación Educacional Oportunidad uses attendance data and continuous quality improvement (CQI) methods to promote attendance and prevent chronic absenteeism with more than 150 schools via a regional Learning Network. This paper will describe the Chilean context, the definition, recording, reporting and use of attendance data, and the methods, outcomes and lessons learned by the regional Learning Network.

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1 Study Setting

Chile is a country in the western part of South America with a population of approximately 17.5 million people and a mixed education system that includes public and private schools at all levels, from early childhood education (ECE) through higher education. Educational quality in Chile, although higher than other Latin American countries, is similar to low or average levels when compared to the other 36 member countries of the Organization for Economic Cooperation and Development (OECD) (Adlerstein et al., 2016; Leyva et al., 2015; Schady et al., 2015). Thus, for Chile, improving the quality of education is the main challenge.

With the purpose of contributing to improving the quality of education, in the year 2007, Fundación Educacional Oportunidad (FEO) created Un Buen Comienzo (UBC), a two-year professional development program for teachers, teachers' aides and school leaders that supports schools to improve pedagogical and leadership practices so that children achieve better socio-emotional and language development. An experimental study of an initial version of UBC in 64 schools showed moderate to large positive impacts in preschool classroom quality, null average effects on the targeted child language and literacy skills on average for the full sample (Yoshikawa et al., 2015), and a positive impact on two of the four language outcomes among the children who most frequently attended school (Arbour et al., 2016).

In addition to finding that high levels of absenteeism diminished the effects of the UBC program's positive impact, the UBC experimental evaluation also revealed, for the first time, the prevalence of absenteeism. Chilean children enrolled in UBC preschools were absent for 23% of preschool days, on average, and 65% of children missed more than 10% of school days in the preschool year, a threshold defined as "chronic absenteeism," which is associated with poorer language and math development in 1st and 5th grades and a higher probability of long-term drop-out (Chang & Romero, 2008). Subsequently, an evaluation of attendance data from the 2018 school year demonstrated that among the more than 3 million students enrolled in K-12 public schools, 28.7% were absent for more than 10% of school days (Ministerio de Educación, n.d.). A separate analysis of MINEDUC's data from 2011–2017 showed that preschool students were absent 14.2% of school days, on average, and that 52.1% of them were absent for more than 10% of school days (Arbour et al., 2021).

This document presents the context of the Chilean education system and its approach to school attendance. It describes how school attendance in Chile is conceptualized, recorded, and reported to the MINEDUC, how attendance data is used by schools and by MINEDUC, and how attendance data reporting and use changed during the COVID-19 pandemic. In addition, it describes innovations in attendance data collection and use by the UBC Improvement Network, through which FEO has prioritized and pioneered work promoting regular school attendance and decreasing chronic absenteeism since 2012.

1.1 Context of the Chilean Education System

The Chilean education system is structured in four levels: ECE, elementary school, high school, and higher education. It is regulated by the Political Constitution of the Republic of Chile (1980) and Ley 20.370 (2009), which established the General Law on Education in 2009.

Early childhood education serves children from birth to six years of age and is divided into six grades according to their age (Subsecretaría de Educación Parvularia, 2018). Completion of the last grade – labeled “kinder” – is not currently a requirement for admittance into elementary school. Even so, ECE coverage for four-year-olds grew from 42% to 86% between 2005 and 2016, placing Chile as the country with third highest coverage for four-year-olds in Latin America (OECD, 2017).

Elementary school is the second level of formal education. It is comprised of eight years divided into two cycles and eight grades. It is mandatory and serves children from six to fourteen years of age. Its completion is a prerequisite for advancing to high school.

High school, the third level, includes four grades serving children from fourteen to eighteen years of age; it is mandatory. This level offers common instruction as well as differentiated training (humanist-scientific, technical-professional, artistic) during the last educational years (11th and 12th grade).

The fourth education level is higher education, which is aimed at students who have completed high school and wish to obtain a higher-level technical degree, professional degree, or academic degree. This level is not mandatory.

In addition, the General Law on Education establishes a mixed education system. All levels from ECE through higher education are financed by resources from the public sector, such as the central government and municipalities, and the private sector, i.e., families or corporate donations (Ley 20.370, 2009).

The public sector contains three types of schools. *Municipal schools* are managed by municipalities or by a municipal corporation and receive State subsidies and contributions from municipalities. *Schools under delegated management* are non-profits owned by the State, managed by legal persons, and financed with public resources. *Schools managed by the Local Public Education Services* are State entities with their own legal personality and assets; these are financed with public resources.

In the private sector there are two types of schools. *Subsidized private schools* are owned by a private natural or legal person and receive State subsidies and family contributions. *Private schools* are privately owned, do not receive public subsidies, but operate on family contributions and donations from private institutions.

Regardless of the school type, attendance is a key condition for children to progress. In Chile, school attendance policies are defined and prioritized by three laws and regulations aiming to deliver quality education to all students. The laws, regulations and measures described below apply equally to all schools in Chile.

The first law, 1998 Law-Ranking Decree No. 2, establishes attendance as an important determinant of school financing through the State subsidy of schools (via

48 grants) to improve educational quality and equity. The national government provides funding to schools via monthly subsidies via two mechanisms. The first mechanism – grants for educational offer – is not affected by attendance. These fixed subsidies account for 20% of school grants and are used for salaries, infrastructure improvement, and equipment, for example. The second grant mechanism – grants for educational demand – pays per-student subsidies based on school characteristics (e.g., rural or urban schools), student characteristics (e.g., proportion of students designated as “priority students” based on a calculated family vulnerability index that takes into account household size, assets and income under the Preferential School Subsidy), and average daily attendance (percent of matriculated students that attend daily, on average in the month) multiplied by an Educational Subsidy Unit (*Unidad de Subvención Educacional*, USE, unit of measure for each education level and teaching modality). The grants for educational demand, which account for 80% of school subsidies, are intended to improve the quality and equity of education. Each year, each school’s leadership team must write and execute an Education Improvement Plan that allocates funding to support the school’s educational endeavors (e.g., infrastructure improvement, school textbooks).

The second regulation, the Ministry of Education’s Norms for Evaluation and Promotion, states that a child’s promotion from one level to another is determined by two fundamental concepts: the achievement of the learning objectives set forth in the curriculum modules, and attendance equal to or greater than 85% of days.

Finally, the third law, Law on Educational Quality Assurance, established the Agency of Quality that assesses school quality and provides schools with reports and guidance to improve quality. The agency constructs an initial performance index that incorporates multiple indicators including standardized achievement test scores (*SIMCE*), distribution of students by grade, and social and personal development indicators that incorporate student attendance (calculated as the child-days attended among the total child-days in the schoolyear). Each school’s performance index is then classified as high, medium, low-medium, or insufficient. The performance category is intended to guide schools through their institutional and pedagogical endeavors. It is also publicly available information intended to guide parents’ and caregivers’ school choices.

2 Data and Methods

To answer the research question, the authors searched scientific journals and on the Chilean government’s official education websites, including the digital platforms of the Library of the National Congress, Ministry of Education of Chile, Undersecretary of Early Childhood Education, and the Superintendence of School Education. Keywords used were “school attendance,” “early education,” “Chilean educational system,” and “collaborative work.” In addition, authors reviewed research published by the Centro de Medición at the Pontifical Catholic University of Chile, a leading

education evaluator in Chile. The search yielded a total of 40 documents that were reviewed; 13 of those were included because they met at least one of the following inclusion criteria: describing a) how attendance is recorded, b) how the government works with school attendance in Chile, or c) how schools record and/or study school attendance data.

3 Attendance Data Collection and Reporting

Like the laws and regulations above, how the government conceptualizes, defines, and measures absenteeism applies equally to all schools Chile.

3.1 How Does the Government Conceptualize and Define Attendance and Absenteeism?

School attendance is understood as the number of days a student attends classes, in relation to the total number of school days (annual school days) (Ministerio de Educación, 2018). Students are divided into four attendance categories (Figure 1): *outstanding attendance*, which includes children who attend equal to or greater than 97% of the total school days; *normal attendance*, achieved by children attending between 90% and 97% of the total number of school days; *repeated absenteeism*, which corresponds to an attendance between 85% and 90% of annual school days; and *serious absenteeism*, children who attend less than 85% of the total days.

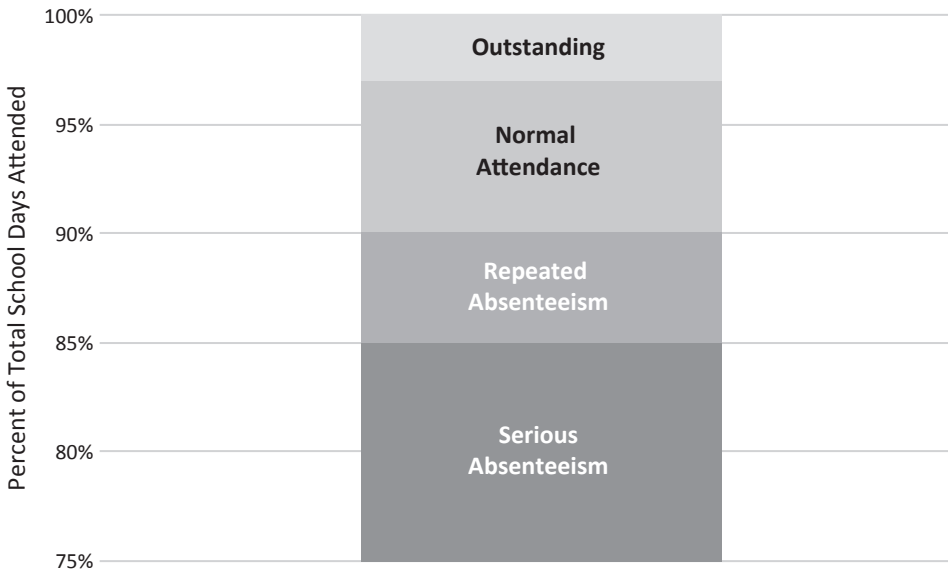


Figure 1 Attendance Categories by Percent of Total School Days Attended

The Chilean education system defines absence as any excused or unexcused absence of a student from class (Ministerio de Educación, 2014). Excused absences are school days not attended or partially attended with the permission from parents, guardians, or teachers. Unexcused absences correspond to school days not attended or partially attended without authorization of the student's parents, guardians, or teachers (Superintendencia De Educación Escolar, 2014).

In Chile, any failure by a student to attend classes, extending one or more hours, must be justified by the parent and/or guardian to the school, with a maximum delay of one day. If a student is absent for more than two days without justification, the school activates the school-defined attendance protocol, typically by telephoning his/her guardian. If there is no answer and the absence continues for up to five to ten days, a typical protocol would summon the guardian to a meeting to provide justification. If the situation persists for more than ten days, the school would then inform the authorities so that they may enforce legal compliance with the law, which requires parents to cooperate, according to the provisions in Circular No. 1 and Circular No. 30 of the Superintendence of School Education and MINEDUC (Table 1) (Ministerio de Educación, 2019; Superintendencia De Educación Escolar, 2014, 2021).

Late arrivals or tardiness is defined as an arrival 15 minutes after the beginning of the first school day module. The student who arrives after those 15 minutes may enter the school, registering the late arrival at the principal's office. If he/she

Table 1 Example of Typical Actions Taken in Response to Student Tardiness and Absence, Defined by Schools' Internal Regulations and Protocols

Duration of student tardiness/absence	Action taken
Tardy – 15 to 29 min	Student must register the late arrival at the principal's office.
Tardy – 30 min or more	Student must enter school with their guardian, who must justify the reason for the late arrival.
Absent – 1 to 2 days	Student's guardian must justify the absence to the school, with a maximum delay of one day.
Absent – 3 to 5 days (without justification)	School calls the student's guardian to justify the absence.
Absent – 5 to 10 days (without justification)	School calls the student's guardian twice to invite them to an in-person meeting.
Absent – 5 to 10 days (without justification) and guardian does not respond to invitation for in person interview	School informs the authorities so that they may enforce guardians' legal compliance with the law.
OR	
Absent – 10 or more days (without justification)	

arrives 30-minutes or more after the beginning of the first school day module, he/she may enter with his/her guardian, who must provide a reason for the late arrival, according to the procedural rules set forth by each school (Table 1).

3.2 Attendance Data Recording and Reporting

In every public classroom in Chile, teachers are responsible for recording attendance in a class book every day before 9:30 a.m., as specified in the Circular No. 1 and Circular No. 30 of the Superintendence of School Education (Superintendencia De Educación Escolar, 2014, 2021). The class book is the official document that must exist for all levels within the school; it contains a numbered list of all students enrolled in the class. Teachers enter into the class book information on students' general background, daily attendance, the content covered in each module, academic and behavioral details, as well as any summons issued to their guardians. Every day, teachers note for each student whether he/she is present, absent, or tardy. In addition, the teacher calculates and notes the total number of students present that day and lists the individual identifying numbers of absent students.

According to law, attendance data collected by teachers in the class book should be submitted to MINEDUC once a week via the General Student Information System (*Sistema de Información General de Estudiante*, SIGE), an online digital system that MINEDUC uses to integrate information in a single place (enrollment, attendance, academic performance, and student retention) (Ministerio de Educación, 2011). All Chilean schools (municipal, subsidized, private, and delegated management) can use SIGE, which allows for uniformity of records, systematization of data, and timely presentation of school attendance reports. Via this portal, each month the school attendance officer or the school's General Inspector must disclose and certify monthly attendance for school subsidy and financing control purposes. He or she must verify that students' attendance data for each day and each grade level in the class book matches SIGE, and then print the attendance statement certificate. Ultimately, MINEDUC holds the school director responsible for reliability of attendance data.

3.2.1 Limitations of Attendance Data Recording and Reporting

One major limitation to attendance data in Chile is that the SIGE platform used to collect the data includes only three options when entering attendance data: "present," "absent," or "withdrawn." It is not possible to record partial attendance (i.e., late arrivals or early departures), nor whether absences are excused or unexcused. Thus, although Chilean policy and regulations clearly define attendance, tardiness, excused and unexcused absences, in practice, students who attend part of the day or have excused absences may be registered in the online platform as "present."

A second limitation to Chile's attendance data is that SIGE's attendance statement generates classroom-level data which is used to calculate the MINEDUC subsidy:

52 the average percent of enrolled children that attend each day. This masks individual attendance patterns that could enable schools to identify students with repeated absences, investigate associated causes, and intervene.

3.2.2 How Has the Attendance/Absence Data Recording and Reporting Changed Due to the COVID-19 Pandemic?

During 2020, Chilean schools operated most of the year remotely because of the COVID-19 pandemic. This change revealed the education system's multiple deficiencies and inequalities. For example, compared to Chile's more vulnerable districts, well-resourced districts managed remote education more efficiently, since students had better internet access, individual computers, and parental support (Quiroz Reyes, 2020). To respond to needs that emerged with remote education, the Chilean government made various efforts to record students' remote attendance and avoid school dropout.

First, an exceptional provision was passed regarding the 1998 Law Ranking Decree No. 2 that changed how schools' monthly government subsidy was calculated. For any school that returned to in-person classes (as of July 1st, 2020) and complied with attendance reporting, the subsidy calculation would use the best pre-pandemic attendance reported through SIGE during March, April and May of 2019 (Ley 21.294 de Subvenciones En El Contexto de La Pandemia Por COVID 19, 2020).

Second, in 2020, the Education Superintendence relaxed some of the regulations around the use of the Preferential School Subsidy to improve connectivity between students and teachers during the pandemic. This change allows schools to use subsidies to contract digital platforms, internet access, and acquire or modify infrastructure and equipment to promote children's virtual attendance and retention in school.

Lastly, in August 2020, under the decree that regulates evaluation, grading, and criteria for student promotion from one grade to the next, MINEDUC granted flexibility to the educational community to define "achievement of learning objectives" and "classroom attendance within the context of the pandemic." Regarding attendance, MINEDUC established that schools should follow usual procedures for students' in-person participation (i.e., recording individual-level student attendance in the class book and SIGE). For students participating in remote learning, schools were advised to keep logs separate from SIGE of students' participation in synchronous and asynchronous activities, (*Criterios de Evaluación, Calificación y Promoción*, 2020). Each school determined how to collect the data. In 2022, MINEDUC proposed the use of a digital class book that permits schools to record all students' attendance (present, absent, tardy), as well as whether their participation is in-person, synchronous or asynchronous.

Fundación Educacional Oportunidad proposed a different concept to respond to the new needs stemming from the pandemic and to avoid school dropout: *participation*, which addresses student attendance in remote learning. *Participation* is understood as the frequent contact of students with school, through in-person,

synchronous, or asynchronous involvement in learning experiences. Schools of the UBC Improvement Network work to ensure that pre-kindergarten and kindergarten children participate at least three days a week with at least one learning experience each day.

The Network has a registration system that includes a form to record child participation in the three types of teaching modalities (in person, asynchronous, synchronous) and produces a report with clear visualization of the percentage of children meeting the target, the percentage of those who have not participated during the week, and participation percentages for each type of interaction. This registry aims to support schools to make data-based decisions and timely interventions regarding students' participation.

4 Attendance/Absence Data Usage

School attendance is tied to different policies and regulations in Chile's education system. It is most closely linked to school financing and to determine whether students advance to the next grade. To a lesser extent, it also relates with the Law on Educational Quality Assurance, the Early Warning System, and the monthly monetary benefit granted to the country's poorest families. These are described below.

First, the main funding mechanism for schools are attendance-based subsidies. The law that regulates State education subsidies demands that schools meet certain requirements to receive subsidies, such as being officially recognized, having classes with a minimum and a maximum number of students, and having internal policies in place, among others. Meeting all requirements allows schools to receive attendance-based subsidies that are calculated by multiplying a per-student amount (USE value defined for each grade level and teaching modality) by the average attendance registered for each grade in the three months preceding payment (Decreto Con Fuerza de Ley 2, 1998).

Second, the regulation on grade promotion and repetition considers two fundamental factors: achievement of the learning objectives for the various subjects and/or curriculum modules, and attendance. Students from 1st to 12th grade are promoted if they pass all subjects in the study curriculum and their attendance is equal to or greater than 85% of the school days in the year. If a student fails to attend 85% of schooldays but their absences are excused and they attend 70% or more, the school leadership and classroom teams analyze the case and may promote the student, in accordance with the school's policy.

Third, the Law on Educational Quality Assurance aims to guarantee education quality by assessing schools and classifying their performance as high, medium, medium-low, or insufficient. Attendance contributes 3.3% to the school's performance category. The attendance indicator considers only students who completed the *SIMCE* national aptitude test, using the ratio between the number of days that each student attended and the total number of official school days in one year,

54 distributing the students in four categories: outstanding attendance (97% or greater), normal (90%–96%), repeated absenteeism (85%–89%), and severe absenteeism (less than 85%).

Fourth, the Early Warning System aims to identify students at risk of dropout as well as the root causes of that risk. This tool, available to school leaders since September 2020, identifies 10% of 7th to 12th grade students most likely to discontinue schooling, using information from previous years – attendance, repetition, academic performance, socioeconomic status, and social and family environment. This information allows the headmaster to plan and execute improvement actions with students at high risk of dropout.

Finally, the Chilean government allocates a school-attendance benefit to the 30% of Chilean families that receive financial support from the state via the Family Ethical Income. Thus, families in extreme poverty with children aged 6 to 18 receive a monthly voucher equal to USD\$7.50 for a maximum period of 24 months, provided their children attend 85% of schooldays or more in a school recognized by the Chilean State.

4.1 Data Access

Data on Chile’s education system is publicly available via MINEDUC Studies Center’s open data platform or by applying the provisions of Law No. 20,285, which regulates access to public information. MINEDUC’s Studies Center generates official databases on school attendance and other topics pertaining to the Chilean education system (enrollment, attendance, academic performance, priority students, teacher evaluations, etc.). Through the platform and under the law, school attendance data of all Chilean students are available to researchers, external organizations, and local authorities.

Attendance databases are released on the Study Center’s website via the “open data” tab (*Asistencia Declarada Mensual – Datos Abiertos*, n.d.). They are easy to understand, envisaged for the entire educational community. The attendance databases are organized by school year and month and include individual information for each student (unique encrypted identifier number, date of birth, grade, school name, and classroom in which the student is enrolled), characteristics of the student’s school (name, region, municipality, type of administration, teaching modality, rurality), and individual attendance information (for every day of the schoolyear, data on whether the student was present, absent or withdrawn; and for each school, the average monthly attendance – i.e., average number of children present among those enrolled in that month).

In addition to open access databases, the Study Center responds to requests for information via e-mail (estadisticas@mineduc.cl). This communication path facilitates interaction between users and the Study Center, offering greater flexibility in the access to information, as intended under the law on transparent access to public information.

When the Study Center does not have the requested information, it redirects the application to other entities, such as the Evaluation, Measurement and Educational Registration Department, the Educational Quality Agency, or the Higher Education Information Service, among others. When publicly unavailable data is requested, the research community and general public may access it by invoking Law No. 20,285, which broadly regulates the right to information pertaining to State-managed entities (ministries, municipalities, etc.), the procedures to exercise this right, and information on exceptions to data access.

4.2 Using Attendance Data to Monitor School Goals and Intervene for Students With Repeated Absences

Regarding goal achievement, MINEDUC developed a guiding framework for the evaluation of education management processes: the Indicative Performance Standards, under which the headmaster is responsible for generating evaluations through analyzing data pertaining to the school. As part of this process, the headmasters and their school leadership teams study the information on average attendance for each grade, as well as at the school level, to verify whether they are meeting the required 85% for the Education Improvement Plan, performance evaluation and the monthly subsidy payment. If the targets are not met, school leadership teams are expected to implement strategies to improve and achieve those goals.

Educational teams use the class book to monitor student attendance and intervene when students exhibit repeated absences. In these cases, teams apply the protocol contained in the Internal Regulations and School Behavioral Manual (IRSBM), which consists of guidelines created by each school that address conflict situations with strategies agreed upon jointly with the education community. The IRSBM must abide to proportionality and non-discrimination principles, and usually includes interventions such as the following:

- Requesting medical letters or documentation to excuse absences.
- Contacting the guardian to identify the type of absenteeism and generate actionable commitments.
- Informing parents of the compulsory nature of schooling and their duty to comply.
- Making home visits.
- Forwarding the situation to Family Courts or the police, for possible infringements on the child's right to education, if a risky situation is detected regarding a student, or if the absenteeism persists.

4.3 How do Schools in the Un Buen Comienzo Improvement Network Use Their Attendance/Absence Data?

UBC's experimental evaluation concluded that high levels of absenteeism diminished the program's effects on socio-emotional and language development, despite its positive impact on classroom quality. FEO thus prioritized promoting regular

56 school attendance. Simultaneously, FEO expanded UBC, which led to the creation of the UBC Improvement Network. FEO adopted CQI methodology, which facilitates data-driven decision-making and peer-to-peer learning in order to generate and disseminate practical knowledge to improve teaching and learning processes.

The Network developed and provides participating schools with an innovative data system that accepts the same data schools submit to SIGE, quantifies aggregate and individual attendance data, and highlights children at risk of or already displaying chronic absenteeism. The platform allows for the daily upload of new attendance data; thus, classroom teams, school leadership teams, school authorities, and even guardians can use data to make real-time decisions to improve.

4.3.1 How do Schools in the Un Buen Comienzo Improvement Network Work to Reduce Chronic Absenteeism?

Although there are strong school attendance policies and regulations in Chile’s education system, most of them focus on average classroom attendance in elementary and high school. The UBC Improvement Network is innovative because it focuses on the pre-kinder and kinder levels, uses individual-level attendance, and deploys CQI methodology to realize aims. More than 150 schools in Chile’s VI Region participate in the Improvement Network, each with a team comprised of early childhood teachers and teacher aides, technical pedagogy leaders, school principals and other members of school leadership, school authorities, and families.

Table 2 Key Driver Diagram to Decrease Chronic Absenteeism (CA) and Promote Attendance in Pre-Kinder and Kindergarten Classes

Objective	Drivers	Strategies
85% of children in the UBC Improvement Network will attend 90% of school days or more (i.e., fewer than 15% of children exhibit chronic absenteeism at the end of the school year)	Universal interventions (for all children)	Attendance panel with incentives Visits and videos by <i>Super Asistencia</i>
	Individual interventions (for children at risk* for chronic absenteeism)	Universal education with parents and guardians in meetings Videos of the <i>Sinforoso</i> character and the Health Corner Attendance Committee and strategies focused on the causes of chronic absenteeism: – Success Plans – interviews with school principal – social worker home visits etc.
Indicators		
– % of children who are *missing 10% or more of school days as of this date (i.e., those at risk for chronic absenteeism at the end of the year)		
– % of children attending 90% or more of school days in the school year		

The Network facilitates a “learning collaborative,” in which school-based teams participate in three large group meetings called “learning sessions,” during a one-year period. In these sessions, Network schools learn a key driver diagram – a theory of change that outlines a shared attendance aim, drivers needed to achieve that aim, intervention strategies, and indicators for process and outcome measures (Table 2). Between the learning sessions, schools test attendance-promoting strategies through Plan-Do-Study-Act cycles. They generate hypotheses about how certain strategies could impact attendance, *plan* the implementation of the strategy(ies), *do* what they have planned, *study* the data collected, and finally, *act* on how to move forward with the strategy(ies) to improve the obtained results. Throughout, teams share data, lessons, and best practices to improve collectively. The intervention strategies, implementation approach and results of this Learning Network have been described in detail elsewhere (Arbour et al., 2023).

5 Discussion

In Chile, attendance is recognized as an important component of school quality and educational equity.

5.1 Strengths of the Attendance Process in the Chilean Education System

The Chilean education system has clear, standardized definitions that apply country-wide, and a good registration system for school attendance (class book, SIGE) that allows the entire education community and MINEDUC access to all schools’ data in an organized, centralized manner. Moreover, these data are publicly available via open access, which contributes to ongoing scholarship about the impacts of attendance and absenteeism on education outcomes (Arbour et al., 2020; González & Kluttig, 2019).

In practice, schools use attendance data to monitor progress toward goals. MINEDUC uses SIGE data to monitor compliance with the average attendance percentage, calculate and pay subsidies to schools in accordance with Chilean law, and classify schools into categories of education quality. In addition, MINEDUC’s Educational Quality Agency provides schools with a report titled *Performance Category* that includes a school attendance indicator and is intended to support schools to identify strengths and weaknesses. Schools are expected to reflect on the report results to design their Educational Improvement Plan.

FEO led a public campaign on the importance of attendance (FundacionOportunidad, 2015), sponsored national seminars to disseminate local and international research on early chronic absenteeism, and convened a workgroup with more than ten public and private institutions to generate solutions to chronic absenteeism in ECE in Chile. Its UBC Improvement Network fills an important gap by focusing on

- 58 individual-level attendance and creating opportunities for practitioners to learn together how to promote attendance and prevent chronic absenteeism.

5.2 Weaknesses of the Attendance Process in the Chilean Education System

There are several ways that Chile's notably strong approach to school attendance could be improved. First, the direct link between monthly school attendance reporting and the government subsidies has had repercussions. There are reports of discrepancies between what is recorded in the class book and what is reported in SIGE. Some hypothesize that attendance-based subsidies cause untenable economic uncertainty for the schools and leads to misreporting information. If misreporting occurs frequently, the data's utility could be questioned. Assessing how frequently such inconsistencies occur and their effects on data quality is not practical, given the complexity of monitoring attendance in all schools in the country. Furthermore, this economic uncertainty may disproportionately impact schools in unfavorable contexts – for example, rural schools tend to have more seasonal variation in attendance (González & Kluttig, 2019), with larger increases in winter absences attributed to weather, large distances between home and school, and possibly higher incidence of or families' concerns about winter illnesses. Lastly, the government does not stipulate that schools use a portion of their attendance-based subsidies to improve school attendance.

Second, both the government and the schools focus on aggregated data rather than individual-level data. This does not allow schools to see patterns of attendance and absenteeism for each student – i.e., the “dose” of education each student experiences or loses – nor identify root causes of absences and appropriate interventions. Thus, although individual-level data is collected and submitted, some of the most useful information remains hidden under the total attendance averages portrayed for each grade or school.

Third, MINEDUC's digital platform (SIGE) is not designed to enable teachers or school-based teams to use the data. By granting only one password to one designated individual per institution, SIGE prevents school-based teams from looking at the data. One suggestion is to create read-only access pages so that any member of the school community could study the data.

Fourth, MINEDUC policies do not specify clearly how to enter a student with an excused absence, and SIGE's only reporting options are “present,” “absent,” or “withdrawn.” Without the option to report students as “absent – excused,” or “partially present (late arrival or early departure),” it is likely, given the subsidy incentive, that these students are reported as present. This may mask absenteeism patterns related to excused tardiness or absences, which can be associated with chronic or ongoing physical or mental illnesses (Boundy & Cortiella, 2018).

Finally, regarding the weaknesses of the UBC Network attendance work, FEO's innovative digital platform is currently limited in scope: it is available only to schools

participating in the UBC Network, and only for the ECE level. However, some State agencies that provide ECE have agreed to use this platform, increasing the scope of institutions learning to use data to promote attendance and decrease chronic absenteeism.

5.3 Suggestions to Consider when Performing a Comparison

In Chile, attendance data is collected at the student level and the databases are freely accessible. However, the majority this data's use and analysis occurs in connection to average classroom attendance. Hence, we suggest that anyone interested in comparing Chilean data to other data analyze the individual-level databases, from which aggregate measures can be derived, if desired. Second, when comparing Chilean attendance data with data from other parts of the world where excused, unexcused, and partial absences are reported separately, it may be helpful to conduct sensitivity analyses to account for the fact that excused and partial absences may be recorded in Chilean databases as "present" or may be inconsistently reported.

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