Evidence and Learning: Strengthening crisis and risk-related data and institutional education information systems

Case Study – Mexicanos Primero

Back to school index

Brief description of practice and the key learning

The "Back to School Index" is a project to use public data to build an interactive platform that provides support and guidance for the management of the opening and closing of 140,000 public and private schools in the Mexico. The project offers decision makers and school communities a model that provides different recommendations on how and when to open schools, balancing the monitoring of the epidemiological situation with the levels of academic learning and infrastructure conditions of schools. And also, considering the demographic conditions of families and households which marginalize students from optimal access to and use of remote education. With this, Mexicanos Primero at the national level and Mexicanos Primero in the state of Sinaloa have sought to contribute to the restitution of the educational rights of children by balancing the right to health with the right to education.

The "Back to School Index" integrates public data into an analytical model that allows the generation of nine recommendation profiles, which guide the prioritization levels for the reopening each individual school. In this recommendation, the urgency of returning to face-to-face classes, determined by the levels of learning insufficiency, is considered as the feasibility of organizing a return following key health security measures, such as social distancing and better access to WASH.

This model has been mounted on an interactive platform that allows access to results for the 32 states and for more than 140,000 primary and secondary schools, public and private in Mexico.

What challenges does the practice/initiative address and why was the change needed?

The main challenge addressed by the practice is to reverse a management of the opening and closing of schools based solely on epidemiological information, and which involved total closures in various states of the country. The Back to School Index proposes to include within the decision protocol data that contribute to the protection of the education rights of students in Mexico. The basic diagnosis that justifies the development of the Back to School Index is that, by not considering variables beyond the epidemiological field, the government never had evidence that would allow contrasting the health urgency with the educational consequences of prolonging the total closures of schools, thus leading to an unfortunate scenario where schools were the first to close and the last to open. In this way, schools remained completely closed from March 23, 2020 until the announcement of voluntary return to schools for the start of the 2021-2022 school year in August 2021. Date in which an undetermined percentage of public and private schools in Mexico returned to face-to-face classes, while others have decided to continue following a totally or partially remote learning modality. In addition, it is worth mentioning that, since recent increases in levels of contagion in January 2022, schools have again been completely closed in most of the states of the country.

A second challenge addressed by the initiative relates to the need to provide school communities with formal mechanisms on which to sustain the decision to return to face-to-face classes. This is because the announcement of the return to face-to-face classes by the federal government and the secretariats in the states always raised the return as a voluntary decision. However, managers, teachers or families were never given any kind of normative support or guiding mechanism to structure the community deliberation process to which they were invited when it was decided that the return would be voluntary.

Therefore, the Back to School Index seeks to offer school communities and decision-makers a robust system of quantitative analysis of the socio-educational reality, through which the opening of schools can be managed in an evidence-based way.

It is also important to include as a third challenge the absence of educational information management systems to which education agents such as parents, students or teachers can have access in an effective and simple way.

What were you trying to achieve? How do the aims and objectives relate to improving the identification and monitoring of education needs and barriers in crisis-affected contexts and emergencies?

In order to positively influence the challenges described in the previous question, the project team had to define the following objectives: 1) Map, analyze and integrate public data dispersed in different sources and build an integration model that communicates in a simple way the intention of balancing the monitoring of the health emergency with that of the educational emergencies aggravated by the total closures of schools. 2) Translate numerical results of the analytical model into easily understandable results to produce recommendations for the reopening schools, offering specific guidelines for each of the more than 140,000 schools that are included in the project, as well as aggregate results for the 32 states of the country, and integrating both options in the online platform of the Index.

Once the operational objectives described were achieved, objectives related to the ability to influence, through communication and public presence, the modification of the management style of decision makers and the deliberation process of the school communities were generated. In this sense, other objectives pursued by the initiative were: 3) Generate greater social empowerment for families and educational figures regarding the demand for a safe and gradual return to schools that protects the right to education of students. 4) Lead decision makers in the states to anchor the planning of the reopening process of schools in empirical evidence regarding the social and educational reality of their schools. 5) Establish a precedent regarding the importance of official education information management systems that allow responding in a timely and vigorous manner to crisis situations and emergencies such as those experienced as a result of the pandemic.

Did your practice meet the initial aims and objectives? What were the main results?

Total success was achieved in achieving objectives 1 and 2 in the previous response. Currently, there is a platform open to users both interested in school results and in the situation of a particular state. So far, we have registered more than two thousand queries, a low percentage, considering that the platform has the capacity to provide information on more than 140,000 primary and secondary schools, public and private. So far, we lack mechanisms to evaluate the impact of this information on the social demand for a broader and faster return to face-to-face classes.

Through direct interaction, today we can only report that a local educational authority in the country (Ministry of Public Education and Culture in the state of Sinaloa) has regularly used the information and reports of the Back to School Index in order to inform their schools reopening process and plan. In this case, of a total of 3,626 schools, 31.2% of them were considered high opportunity/feasibility profiles for return. And when analyzing the sample of 370 schools that began the process of voluntary reopening in the state, it was found that 62% of them were in profiles of high opportunity/feasibility for return. This allows to clearly demonstrate the prioritization of schools in this situation in the reopening strategy implemented by the state education authority.

What stakeholders were involved? How did you ensure their involvement was participatory and collaborative?

The development of the Back to School Index was led by a team of collaborators from Mexicanos Primero. The original analytical model was inspired and fed back by the work of the Centro de Estudios Espinosa Yglesias (CEEY) which specializes in research on social mobility. There was also feedback from the National Institute of Statistics and Geography (INEGI) of Mexico, which contributed valuable observations for future iterations of the model, for example proposing that the indicator for assessing the severity of the epidemiological situation be the data of excess mortality by state. During its design and development phase, the Back to School Index also had the collaboration of specialists from the Data Center of the national company Coppel.

How did the practice interact with and potentially strengthen the institutional education information systems in the context?

The Back to School Index has not yet found an opportunity to strengthen government education information systems. But the experience of acquiring the data necessary for the fulfillment of the objectives of the project has revealed a series of challenges in institutional education information systems, such as the fragmentation of the information (information available in different sites), the difficulty in its access and navigation, and in some cases, the existence of bases with a high number of observations with missing data. The comments on social networks of the users, as well as the mention of the communicators about the initiative from civil society to build support for decision-making, in the face of the limited official response, makes us think of a potential increase in capacities in both sectors, the civil and the official, for the management of information systems on education.

From this experience, it is estimated that the institutions in charge of managing and coordinating the national and state educational systems in Mexico could benefit greatly by adding the technical experience of organizations such as the INEGI, which through the downloadable data platform of the Population Census (2020) provides an exemplary information system, capable of giving access to data in granular analysis units such as the AGEB (Basic Geostatistical Area) with a high potential for social research, from which the Back to School Index benefited greatly.

What challenges and barriers did you face and how did you change your approach to overcome these?

As noted above, the first barriers to the Back to School Index stemmed from difficulties in accessing and providing educational data. Especially, in those referring to the conditions of school infrastructure and learning, which is why the final sample could only include primary and secondary schools, excluding preschools and baccalaureates, two levels with very poor quality of information. In the case of standardized test results, an important variable in the establishment of the educational urgency that the

project sought to communicate, it was necessary to resort to data imputation techniques, since not all the establishments had results available in the last application of PLANES tests (National Plan for the Evaluation of Learning) at each level, despite the fact that its mandate contemplates it.

Finally, another important source of challenges has to do with generating incentives for greater access and use of the information delivered by the platform by users such as families, teachers, students and decision makers. Some of the hypotheses currently being analyzed are that the low levels of advertising content and usability experience of the platform have not facilitated a more massive use. For example, it is important to note that the platform was designed mainly to have maximum comfort and efficiency on the computer screen, which generates a barrier for users who want to access information through mobile phones, one of the mechanisms for accessing information of greater availability. For this reason, one of the alternatives currently under review is to allow the search for information from consultations via mobile phones.

What was the key learning from your practice? If you did it again, what would you do differently? What pointers would you give to help someone from another organization facing similar challenges?

The first learning is that the configuration of a model of these characteristics implies being able to interact with important levels of discretion and, therefore, these are highly perfectible models. Both the treatment and the integration of the different variables that are incorporated into the model follow processes of analysis and decision-making that can hide important biases. Beyond the equity bias that was intentionally added when considering that the profiles to be prioritized should describe those schools that had the highest levels of educational urgency, that is, as "affirmative action", other methodological decisions offer room for improvement. For example, as already mentioned, there is the possibility of incorporating as biweekly update data those referring to excess mortality[1], replacing hospitalization rates and deaths labeled as Covid-19 by each state. In addition, the current design of the model integrates this information always in relative terms, which will generate observations (schools or states) with less opportunity to return, even if the levels of epidemiological activity were below thresholds of concern. Another great opportunity for improvement is to explore a model open to the incorporation of data reported by the users of the platform, which would allow obtaining more granular and specific results.

On the other hand, the urgency of being able to publish the Index within the window of opportunity / need generated by the official announcement of the voluntary opening of schools, led the team to privilege a digital design that did not offer the ideal experience and interaction to users. This, in terms of administration and updating of the site, is far from optimal process automation parameters, highly relying on the manipulation of an expert administrator for the integration of new data and the production of new results.

In terms of advocacy objectives, the lessons are several. First, it is advisable to think from the beginning of the project how to ensure a more widespread use of the tool. Second, realistically plan the goals to pursue and the audiences to prioritize. By prioritizing the construction of a platform that offered results from more than 140,000 schools, agility was lost in convincing the tool for adoption by decision makers. Except in the case of Sinaloa, the public presentation of the index was carried out a few days before the

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[1] Excess mortality is a term used in epidemiology and public health that refers to **the number of deaths from all causes during a crisis above and beyond what we would have expected to see under** 'normal' conditions.

announcement of the voluntary reopening of schools, without the authorities being able to recommend that the deliberation process of each school could be based on the guidance provided by the platform.

Therefore, a recommendation is to have different timelines with different actors, audiences and levels of impact, valuing sharing with some of them, early, the results obtained by the platform even if the platform does not yet offer all the functionalities that you want to add. And also, having more segmented dissemination strategies and with a greater component of direct interaction, through instances such as training workshops in the use of the tool and interpretation of results directly in the administrative subunits or in selected school communities.

Finally, it is highly recommended to include in the programming of activities of this type the development of comprehensive and ambitious communication strategies. In the current context, in which news has a fleeting life cycle, it is important to extend in time the messages of a project, not only to raise an issue on the public agenda and set the terms of the discussion, but to reach the goal of converging in decision-making in terms of co-responsibility, support, scrutiny and evaluation from civil society to the school system as a whole.

Submitted evidence

- Reporte por entidad Sinaloa
- Resultados por CCT Sinaloa
- Indice de regreso 3.0
- Nota explicativa