# Formative evaluation of school children in times of pandemics

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**Abstract:** The state of emergency around the world has caused different consequences (economic, political, and socio-cultural variations) unusual, as in the educational environment where teachers must cope with the situation with the technological tools available to develop a formative assessment in a context of confinement, which limits their teaching work. This article focuses on the strategies used by teachers in the development of formative evaluation, the construction of evaluation criteria, and feedback used during virtual work. The qualitative method is applied with a phenomenological approach (ethnographic) in which 4 teachers participate in an interview in order to obtain results that can demonstrate the different evaluation methods based on educational issues. In synthesis, the study is complemented in three stages: (a) Descriptive, (b) Structural, and (c) Discussion. Finally, the formative evaluation in a sustained and personalized way, using different means of communication, makes a follow-up according to what each student needs and allows to know what each student has managed to develop during the confinement period, which will allow to propose teaching strategies and to better adapt the teachers' practice when returning to the face-to-face modality.

**Keywords:** Formative evaluation, feedback, virtual education, COVID 19

## 1. Introduction

The global outbreak called Covid-19 has not only generated the most serious health crisis that the world has seen, but public entities also have reacted to the rapid spread with the closure of airports, borders, recreation centers, work centers of fundamental institutions (study centers at all levels and modalities), as they were placed for the spread of the virus on a large scale, creating difficulties because they were not prepared for a quality global distance education (Ramirez, 2021). Therefore, with the vision of the teaching and learning method, the concern arises to determine the evaluation that fits the improvement of learning, considering the formative evaluation with its tendency to modify the roles of the subjects of the evaluation with the direct participation of the teacher (Salesiano et al., 2021), who by developing formative assessment in an adequate manner generates high learning through planned activities that allow obtaining the evidence of students' productions and performances in order to reflect on their practice and improve teaching-learning strategies and techniques (Minedu, 2016)

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Likewise, this is how formative evaluation employs feedback, as a basic instrument that allows linking all the actors in the teaching-learning process, propitiating that the student learns and is able to correct his mistakes reflexively and the teacher learns to improve his teaching practice, with evaluation having to be present throughout the educational process in order to validate the fundamental methodical changes (Gallardo and Thuillier, 2016; Riveros et al., 2021).

On the other hand, the impact that the pandemic has generated is to be able to perform activities such as teaching-learning from home, using ICT's generating bewilderment and difficulty in teachers to develop the educational processes (Serna et al., 2020) fugenerating ndamentally when they carry out the formative evaluation and must collect the productions and performances of their students, especially when there is a learning strategy such as A in C at the national level, of which many times a faithful copy is made without contextualizing it, nor taking into account the diagnostic evaluation in the planning and mobilization of all capacities in competence when building the evaluation criteria (Latin American, 2021a). In addition, it is important to identify the main performance of the teacher who leads the students' learning process (Gallardo and Thuillier, 2016). Therefore, through virtuality, it is difficult to observe and analyze students' performances, productions, and evidence, as well as to perform high cognitive demand feedback (Unesco, 2020). On the other hand, due to the fundamental role that evaluation plays in times of pandemic during the educational process, countries are implementing inclusive evaluation processes considering students, families, teachers, community, and other stakeholders (Ramirez, 2021). On the other hand, the region of Latin America and the Caribbean has been one of the most affected by the educational crisis produced by the pandemic, thus the need to evaluate is present, formative assessments are a key milestone in learning since they allow determining whether learning objectives were achieved and making pedagogical decisions according to what was concluded (Widiastuti et al., 2020). Therefore, in the case of the pandemic, it will be essential to measure the effect of school closures on learning, and to determine corrective actions in time, but some formative assessment mechanisms become unfeasible in the context of distance assessment (Porlán, 2020; Rodríguez, 2020).

Next, in order to carry out a formative evaluation, it is necessary to know the difficulties faced by students in this context of crisis and isolation, such as homes without conditions for study, adults unable to support students, families emotionally affected by the disease, i.e. to have a clear diagnosis that allows us to recognize what steps to take next (Ramirez, 2021).

Therefore, the role of the teacher becomes that of a companion in the student's learning path, resolving doubts and providing scaffolding, in a distance education context it adapts quite well because it is not required that all students are connected at the same time to be fed back, on the contrary, this is done in a differentiated manner and gives emphasis to those contents that are of interest to the student (Unesco, 2020). In summary, given the operational problems to carry out a large-scale assessment, coupled with doubts about the validity of its use in this virtual situation, countries have opted for various strategies, including the use of alternative approaches and methodologies to assess learning (Unesco, 2020; Ramos and Rueda, 2020).

The study aims to analyze the way in which four basic education teachers adapt formative assessment in their virtual pedagogical practice (Montoya, 2021). The study focuses on four categories of analysis (evaluation processes, type of feedback, evaluation criteria, evaluation methods, and techniques) (Montoya, 2021). Likewise,

formative evaluation accompanies the entire teaching-learning process granting effectiveness to the process, fundamental for training in virtuality as it accompanies the student by providing feedback for his self-managing, creative, participative development that allows him to achieve his competencies with meaningful learning (Del Socorro and Flores, 2017). In this sense, feedback should be immediate because it has a great formative meaning, equivalent to the correction that the teacher performs in a face-to-face mode that allows him to solve the problems encountered and continue with his learning (Coronel et al., 2020).

Finally, accompanying students at a distance employs flexible pedagogical strategies, emphasizing competencies that interest and self-motivated students (Unesco, 2020). In addition, feedback is a key process not only to identify the achievements of students but also whether this learning is significant and allows self-management (Del Socorro and Flores, 2017). Therefore, the evaluation criteria, instruments that allow knowing in advance the optimal qualities of competence, is shared by the teacher to the student, indicates what is expected of an activity and is considered as a route or guide (Del Socorro and Flores, 2017). In summary, from the systemic approach, allows establishing an adequate combination between external and internal evaluation, between evaluation, and teacher training and between evaluation and improvement of its processes, determining the moment to apply the instruments (Tedesco, 2016).

## 2. Techniques and methods

The study is qualitative in nature and is interested in understanding how basic education teachers have adapted formative assessment and the strategies used in their virtual pedagogical practice (De Castro, 2021). Likewise, as a methodological approach, an ethnographic phenomenological study is chosen, which allows approaching teachers in the current context and understanding social phenomena from the perspective of the teachers themselves, recognizing how formative assessment is applied to students and how this information is analyzed, systematized and used to improve the teaching-learning process during virtual work (Taylor and Bogdan, 2015). On the other hand, the study was structured based on three stages: descriptive, structural, and discussion. The technique for the collection of information was the interview made up of 22 semi-structured questions distributed in four categories: evaluation processes, type of feedback, evaluation criteria, evaluation methods, and techniques (Taylor and Bogdan, 2015). The interview was validated by two experts in the field to prevent errors of consistency, relevance, technicalities, as well as repetitions and redundancies (Segado, 2020). The theoretical information was mainly extracted from reliable databases such as Scopus, EBSCO, and Scielo (Segado, 2020).Likewise, in the first descriptive stage, the planning of the methodology and the ethical considerations of the research were developed, preparing technical documents: letters of presentation to expert judges, letters of informed consent to the participating teachers, prior awareness of the importance of the study problem, objectives, educational relevance, as well as the ethical protocols, through an informative talk (Huanca and Geldrech, 2020). Then, in the structural stage, the intervention protocols were proposed and a first approach was made with the participating teachers to discuss the topic of the study. In addition, the researcher's functions were defined in relation to the field of study (Huanca and Geldrech, 2020; Cerón, 2020). Therefore, after applying the interview, the reflection of the results was carried out to organize them and place them in the categories of the study (García et al., 2020b; Cerón, 2020). In summary, private reflection was carried out with the teachers so that they could confirm the legitimacy of their responses and express their agreement or disagreement with the interpretation made by the researchers before proceeding to the discussion of the results in order to contrast them with other previous studies and be able to find similarities, differences and make new contributions (García et al., 2020c; Sanz, Serrano and González, 2020).

## 3. Results and Discussion

The most important results obtained are detailed and organized according to the questions, presented through a narrative analysis accompanied by contextualized literal quotations (Rodríguez et al., 2016), which allows understanding from the perspective of the participants, the formative evaluation process, the types of feedback, the usefulness of the evaluation criteria and the evaluation instruments during the pandemic (Rodríguez, 2020).Teachers, in general, know the evaluation proposed by MINEDU since they receive workshops, talks, and webinars in charge of the UGEL and others in a particular way, so they are aware that to develop a correct evaluation they must develop an adequate meaningful situation that is in relation to their context, to the needs and interest of their students and the importance of developing a retrospective reflection, as well as the types of feedback provided to the student.  "the meaningful situation was raised taking into account its elements, understanding what I want to do, in what time I want to do it, to whom it is addressed, what is the challenging situation that I develop in this situation and above all the diagnosis to determine the competence that needs to be potentiated in my students, so that is my challenge". In addition, the teachers interviewed agree on the fact that in the virtual world they have several difficulties to develop a formative evaluation, among them the lack of technological tools for the students, the lack of internet, the work schedules of the parents or the adult responsible for the student who accompanies him/her in this process, but the most outstanding one is that parents intervene a lot in their children's productions and performances in their eagerness to present the best evidence of their work to their teachers and the classroom group, but they do not realize, despite the fact that the teachers send them scopes and recommendations, that they do not allow autonomy, independence and that the student builds his learning by himself. "I tell my parents to let their children work on their own, that they can do it, and I explain to them that I have to evaluate their children, not them, but they continue to get in the way.

On the other hand, feedback is an essential part of an evaluation and this is what the teachers observe, recognizing that it can be given in different types and according to the group of students, their level of achievement and their connectivity, but it must also be timely, highlighting the questions and re-questions. Through feedback, our students and teachers reflect on their performance, helping or providing scaffolding in some cases, in others enhancing their learning, and in others helping the student to realize his or her error or difficulty so that he or she can correct it, the result of this feedback allows the teacher to meditate on the strategies she is using, looking for those that are more appropriate to support the student to reach the expected achievement, as well as the teachers state the feedback not only allows them to rethink the challenges for their students but for themselves who have to see what else they can work on with the children to enhance their learning in what way to offer scaffold, think about the type of question that responds to the competence, the performance even to the standard. "At the beginning, I used to give basic and elementary feedback to my students where I received yes or no answers and where I only gave them short encouragement telling them: bravo, good, very good, but then I understood that I had to give my children a descriptive feedback so that they could explain and realize what they had worked on and finally reach a reflective reflection of high demand, which would help them to strengthen their knowledge and this would be useful to apply it in other situations of their daily life".

On the other hand, the evaluation criteria are the purposes of the significant situation, becoming tools that will allow evaluating the student's performance in relation to the achievement of the desired competence, but for this, they must be observable, measurable, take into account different components such as performance, capacities that are mobilized within the competence, the CNEB standard and be in accordance with the problem situation to be faced. "I have to see what I want the child to achieve, I have to see my performance, my competence, my national curriculum, even the A in C strategy itself, all of them are elements that allow me to formulate my evaluation

criteria by answering the questions: what do I want to achieve, how am I going to do it, and what am I going to do it for?". On the other hand, the teachers recognize that it is necessary for students to understand what is being asked of them in the evaluation criteria, otherwise, they will not be able to perform the activity, likewise, the adult who accompanies the student at home must also be made aware of it, explaining what our children are expected to demonstrate in the development of the competency to prevent them from going beyond the topic being worked on during the day. "To parents, especially because they are young children and they are the ones who make their children work at home, I have to give them the evaluation criteria, but in simple language, otherwise, they will not understand me".

In fact, the evaluation criteria, according to the teachers, are observable through the learning evidence, that is, the productions and performances that show what the students know and what they have to develop in a situation or in relation to the learning purposes, but in the virtual world it is very difficult to receive real evidence that shows the real performance of the students, because in many cases when the evidence are received synchronously or asynchronously or asynchronously, the intervention and interruption of the parents can be appreciated. The teachers analyze these productions using instruments and, on certain occasions, encourage students to co-evaluate and self-evaluate. "It is noticeable that the videos sent of the productions and performances of my students are not a natural performance of the child, but have been prepared and directed by the parents and even when it is synchronous through a platform such as Zoom, the parents can be heard giving answers to the children or the children looking away from the camera as if waiting or listening to what the parent is saying". In another way, another difficulty that teachers recognize is accentuated in the framework of virtuality is when the student does not send the evidence requested according to the evaluation criteria so they must be supported with questions or videos that cannot be sent complete to WhatsApp to guide them to find the right path by reflecting on their actions. "With my students who cannot connect synchronously due to lack of megabytes or devices, I cannot send timely feedback on their productions especially those that are wrong".

Finally, teachers record what they observe and analyze the productions and performances of their students using different techniques in the physical evaluation instruments, the most used in this virtuality are the checklist, which is somewhat difficult to complete due to the lack of connectivity of some students; portfolios but in some cases, families do not file all the evidence of their children's performance as requested by the teacher, field notebook, observation sheets that cannot be applied correctly because many times the videos of the students' productions sent by the families have been edited, progress maps and interviews with parents that in some cases the answers are not truthful. "Daily I record in my field notebook what I observe of the performance of my students as they are presented, then I analyze them and give feedback if it is the case finally I transfer my analysis to the observation sheets and at the end of the learning experience an assessment can be made for each student that will be recorded in the progress map."

## 4. Conclusion

The uncertainty regarding the duration of the pandemic and remote work, worries the participants of the study, the teachers have the great challenge of developing strategies, technological competencies, and skills that have not been part of their training and readapt their practice, since it is confusing to transform the evaluation from one day to the next due to the scarce theoretical-practical knowledge of how to perform it in a non-presential way, especially with young children, it is necessary to redefine what, how and when we evaluate (Soledad, 2020; Dussel, 2020). Furthermore, they affirm that formative assessment practices will not go back to the way they used to be (Casademont, 2020). On the other hand, in the face of this reality, teachers' strategies, routines, evaluation, and feedback schedules have changed drastically; therefore, they are trying to build a new daily routine, creating

spaces in a synchronous and asynchronous way to communicate, to observe performances, to provide feedback and to record in evaluation instruments their assessment of their students' performance (García, 2020a; Sánchez, 2020; Moreno, Candela and Bañuelos, 2019).Likewise, the formative evaluation in a sustained and personalized way using different communication channels follows up according to what each student needs and allows knowing what each student has managed to develop in the confinement period, which will allow proposing teaching strategies and better adapting the teacher's practice when returning to the face-to-face modality (Neciosup, 2021; Latinoamericano, 2021b). However, the importance of evaluation instruments to improve quality and equity was overestimated, since the results of the measurements shown by the media have a political impact unrelated to the relative technical soundness of some instruments used, nor to the ability to correctly interpret the information, surpassing the ability to modify such results (Kú and Pool, 2018) although this scenario generated by the pandemic pressured teachers to carry out a more autonomous work, opening possibilities to innovate with formative evaluation mechanisms, and in some countries even encouraged them, teachers state that the existence of obstacles and contextual limitations, time, resources, formative deficiencies within the institutions, in some cases make formative evaluation not optimal or becomes incoherent with the demands of the curriculum (Unesco, 2020).

## 5. Recommendations

Recommendations of the study: This qualitative research should be continued at a quantitative level in order to be able to adapt measurement variables, statistical data, and data collection methods in order to measure the indicators and obtain results based on a subject set in a scenario with a larger sample. In addition, to carry out classification research using the stages of the formative evaluation of schoolchildren to determine the different points of view that can provide information to teachers to make a strategic evaluation, teaching, and learning decisions. Similarly, a comparison study on the different methods of formative assessment (before and during the pandemic) and evaluate what are the differences, similarities and/or relevance between them in order to provide options for teachers to generate more teaching-learning strategies. It is advisable to conduct longitudinal research to evaluate and specify the changes of information and technology in formative assessment tests. In summary, it is necessary to increase the number of variables, dimensions, and indicators in order to take this transcendental study to provide concrete and complete data to teaching specialists so that they can make different options for solutions to teaching and learning strategies (formative evaluations, exams, practical and theoretical tests).

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