

## **A PROPOSAL FOR TEACHING AND LEARNING IN PRIMARY SCHOOL POST-COVID-19**

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### **Abstract**

With the adoption of emergency remote education during the Covid-19 pandemic, students' teaching and learning practices changed from one moment to the next. According to the perceptions of 4th grade students in primary schools in northern Portugal, digital technologies were used to perform learning tasks, such as research projects, viewing and making of videos on curricular content and on topics of current reality, and taking quizzes using the Kahoot App. Such tasks involved working individually but also in small groups, and the use of teaching methods more focused on students. Therefore, in view of these students' perceptions and the literature review on teaching and learning in today's society, the aim of this work is to present a proposal for teaching and learning in primary school post-Covid-19, which is based on the use of active teaching methods for students, the performance of tasks that correspond to their interests and needs, as well as the complexity of learning they must carry out, in particular with the use of digital technologies, as well as their participation in the assessment of their learning processes so that they can adjust them and thus succeed in school.

*Keywords: Teaching, learning, proposal, primary school.*

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### **1. Introduction**

The emergency remote education registered in Portugal with the Covid-19 pandemic has led to changes in teaching practices and learning processes of students.

Having sought to gather the opinion of 4th grade students in primary schools about learning under this type of teaching, we confirmed the use of digital technologies for the continuity of learning and, with them, the use of teaching methods more focused on students and on the learning to be acquired. These students claimed to have been involved in research projects about natural and social reality, problem solving, viewing, and making videos, PowerPoint presentations, and taking quizzes using the Kahoot App. Through these tasks performed individually or in small groups, the students stated that they built their learning.

Taking this into account, these positive aspects of emergency remote education mentioned here by the students participating in the study and the literature on teaching and learning in the context of a society of information and knowledge and demanding in the roles of citizens, we aim, with this work, to make a proposal for teaching and learning in post-Covid-19. This proposal was drawn up considering the following axes: teaching and learning methods focused on students and the type of learning to be carried out; tasks performed individually or in small groups involving students in the study, research, analysis and resolution of problematic situations; the integration of digital technologies in the process of teaching and learning, as support for its implementation; the participation of students in the evaluation of learning, which should be continuous and based on criteria for evaluating learning tasks, with a view to self-evaluation of learning processes by students.

### **2. Theoretical background and design**

With the emergence of the Covid-19 pandemic and social confinements that occurred from it, there was a need for closure of schools and the implementation of emergency remote education. During these periods of social confinement, the teaching and learning process kept going thanks to the use of digital technological resources that allowed the realization of synchronous classes and asynchronous moments of interaction between students, and between them and their teachers.

The move to emergency remote education, as a temporary response to an immediate problem (Bozkurt & Sharma, 2020), created an "educational disbanding" (Pacheco, Morgado, Sousa & Maia, 2021), as it forced teachers and students to adopt and adapt to the use of digital resources and tools for pedagogical purposes, such as online platforms (Zoom, Teams, Moodle, Chat among others), computer, tablet, smartphone with internet access. According to Oliveira, Corrêa and Dias-Trindade (2022, p. 5), "educators, even once resistant to the use of TDIs in the classroom, had no other option than to adopt government guidelines aimed at emergency remote education."

The use of digital resources and tools by teachers and students introduced changes in teaching and learning methodologies, focusing more on the interests, curricular and personal needs of students, giving them a more active role in the teaching, and learning process (Ferreira & Bastos, 2022). In fact, as Cosme, Lima, Ferreira and Ferreira (2021) refer, digital technological resources facilitate the construction of learning, especially through problem teaching, the use of the project work methodology, case studies and other teaching methods. With this type of active teaching and learning methods for students, their role and the teacher's role change, since it is up to the latter to create the pedagogical conditions for the students to build, interactively, the learning they need for school success and for the exercise of active, responsible and critical citizenship (Cosme, Lima, Ferreira & Ferreira, 2021). Therefore, it is up to them to guide students in problem solving and research on themes and problems about the reality in which they live. In turn, students must be responsibly involved in the learning tasks they are proposed for understanding natural or social phenomena or discussed and planned with teachers. With a more active role, interactive with classmates and with digital resources, and also a more creative role, students learn about the natural and social world, acquiring procedures, attitudes and values that allow them to respond to the challenges they face in life in a society of information and knowledge and demanding in terms of economy and of social coexistence.

It was considered that the use by students of digital resources during periods of emergency remote education which would allow them to have a more participatory and interactive role in the construction of learning, so we carried out a questionnaire investigation with open questions about the perceptions of 4th grade students in primary schools in northern Portugal about learning in the context of emergency remote education during Covid-19 pandemic (Ferreira & Bastos, 2022). From this study, we could verify that the students used the computer, tablet, and smartphone with internet access to perform learning. In addition to allowing them to participate in synchronous classes, these technological resources allowed students to read texts, take quizzes using the Kahoot App, conduct individual and small groups research on topics, proposed by or discussed with teachers, develop research projects, view, and make videos, and presentations in PowerPoint about topics of curricular programs or from prior research.

These results seem to show that the teaching/learning process was more focused on students' learning, structured by tasks that implied greater participation and interaction of students, also contributing to the acquisition of digital, personal, and social skills in them.

### **3. Objectives**

The Covid-19 pandemic and the adoption of emergency remote education because of the closure of schools led to changes in the teaching process, but also in the learning processes of students. It was for this reason that we conducted a study on the perceptions of 4th grade students in primary schools about learning in emergency remote education (Ferreira & Bastos, 2022). The results showed the use of digital technological resources for learning, such as the computer, tablet and smartphone connected to the Internet, the online platforms for classes and for the asynchronous interaction of students and teachers (chat, email), as well as YouTube, quizzes in the Kahoot application for school tasks. They also showed that for students, the teaching focused more on students' learning, structured with more participatory, interactive, and playful tasks, involving them in research/project and on topics from curricular programs or the natural and social reality in which they live.

Since the results obtained revealed changes in the pedagogical model adopted in the teaching and learning process, the objective of this communication is to develop a teaching and learning proposal for the 1st cycle in primary school post-Covid. This proposal is elaborated from the relevant aspects of learning in emergency remote education mentioned by 4th grade students in primary school and the literature review on teaching and learning in the context of a society of technology and information, complex and demanding for its citizens as the one in which we live in.

### **4. Methods**

The proposal for the teaching and learning process for the 1st cycle in primary school post-Covid has as its starting point the positive aspects of emergency remote education mentioned by students,

in particular with regard to the teaching and learning methodology used, the type of tasks performed for learning and the integration of digital technologies in that process (Ferreira & Bastos, 2022). We will also refer to the literature on teaching and learning centered on students and the learning they must perform, their interaction and the interaction they have with digital technologies as means of constructing multiple learning, essential for life in a complex and demanding society such as the one in which we are in.

This proposal, which we intend to present, has the following structuring axes:

- The use of active teaching and learning methods for students;
- The structuring of this process with learning tasks that imply students' problem solving, research and interaction, for the construction of complex and profound learning about the reality that students experience;
- The use of digital technological resources as a means of access to information and interaction for the construction of such learning;
- The evaluation as a continuous practice, done by the students and carried out by them to self-evaluate their learning processes, by being autonomous and responsible for them.

## 5. Results and discussion

The remote emergency education experienced by teachers and 4th grade students in primary schools in northern Portugal brought changes in the teaching and learning processes. Methods more focused on students and on the learning they had to perform were used, structured with tasks more directed to the resolution of problems by students, to research, in small groups or individually on topics or problems related to the natural and social reality and with the use of digital technologies for accessing information and for accomplishing those tasks, as well as for the continuous evaluation of the learning, done by the students (Ferreira & Bastos, 2022).

On the other hand, there are several references in the literature (Cosme, Lima, Ferreira & Ferreira, 2021; Nóvoa & Alvim, 2022; Pacheco, 2021; UNESCO, 2022) for the need to transform the pedagogical model used in schools and in the classroom (Nóvoa & Alvim, 2022), so that they are places of study and construction of learning by students (Nóvoa & Alvim, 2022).

Thus, we will present the proposal for teaching and learning according to the four axes mentioned above and agreeing that "a new social contract for education [which] will allow us to think differently about learning and relationships between students, teachers, knowledge and the world is needed" (UNESCO, 2022, p. XIII).

### 5.1. The use of active teaching and learning methods for students

To form citizens capable of living together and responding to the various challenges that the intercultural society of knowledge, technology, and of rapid change that we are currently experiencing, it is necessary to change the pedagogical model of schools and the teaching and learning process. It is, as Nóvoa and Alvim (2022, p. 15) refer, creating the "metamorphosis of school".

Although the educational responses given, from one moment to the next, by schools and teachers to the closing of schools during Covid-19 should not be "a pretext to institute any new educational normality" (Nóvoa & Alvim, 2022, p. 25), the experiences considered positive by students for a change in the pedagogical model should be used. And this is because the results of the study conducted with 4th grade students in primary schools on learning in emergency remote education showed a certain change in teaching and learning methods. In this context, the teachers involved the students, individually or in small groups, in research and projects on themes of natural and social reality, in the resolution of problematic situations that implied a greater participation of students in the construction of their learning (Ferreira & Bastos, 2022). Therefore, we sought a teaching more focused on the students' learning, which Cosme et al. (2021) refer to as a paradigm of learning. In this paradigm "children and young people are assigned the central place in the educational act" (Cosme et al., 2021, p. 17), because they are the ones who, through processes of research, discussion and reflection, build learning of a curricular nature, but also of knowledge, procedures, attitudes and values necessary for the understanding of the society in which they live and to have a responsible, critical, and democratic participation in it. For this reason, it is up to the teacher to facilitate the material and human conditions for learning, by helping and guiding the students through the processes of this construction. The teacher must promote discussion, research, interaction between students as means of knowledge of the world and realization of essential learning to the exercise of citizenship in democratic societies, but complex from the social, cultural, environmental, and economic point of view.

Thus, the exhibition method, used in a conception of school education created since the 19th century, has to give way to teaching and learning by problems, to the methodology of project work, to critical and creative thinking, to case study, laboratory work, among others (Cosme et al., 2021), which

provide opportunities for students to build complex and profound learning (Fernandes, 2022) to enable them to understand and act in the current reality.

## **5.2. Tasks for building learning**

If teaching methods must be focused on the students and the learning they need to do, school tasks also have to actively involve these students, so that the classroom is a space for study, research and collaboration between students, and between them and their teachers. Learning environments must be created which are characterized by the "involvement and participation of students, appreciation of study and research, cooperative learning, integrated and multi-thematic curriculum, pedagogical differentiation, etc." (Nóvoa & Alvim, 2022, p. 27).

It is intended, in this context, that the teaching and learning process be planned with students and structured by performing learning tasks that involve students, individually or in small groups, in processes of information research in different sources, reflection and discussion, with which they build the learning they need in curricular terms and for their active and responsible life in a demanding society. As Nóvoa and Alvim refer (2022, p. 29),

*The day-to-day school life cannot revolve around the 'class', but rather around the study. This implies a change in the teachers' role, emphasizing their responsibility to the overall educational work (monitoring, tutoring, support, etc., and not only 'lessons'), reinforcing their action in the production of pedagogical and curricular knowledge and evolving into forms of collaborative action.*

In fact, with the great availability of information and easy access for students, exhibition teaching cannot continue to be the only one in the classroom, with which students access the knowledge transmitted by teachers. Emphasizing the construction of the learning that students need for the continuation of studies and for their personal and social life, using digital technologies linked to the Internet, learning results from processes of study, research, analysis, and reflection in collaboration with classmates and the teacher.

The learning environment to be created, therefore, presupposes that students engage in research projects in small groups on themes of natural and social reality, from readings, analysis and discussions on social, civic, environmental, technological, intercultural texts and other issues that result from their interests and needs. Learning can still be constructed from the resolution of problematic situations involving students interacting in the search for answers to the problems posed by teachers or discussed with them. Study visits, viewing, and discussion of videos on topics or problems of today's world are learning opportunities.

## **5.3. Digital technological resources as a means for the construction of learning**

We live in a society where digital technological resources abound and schools, teachers and students must take advantage of their existence as means available for study and work and thus for the construction of learning. In agreement with Nóvoa and Alvim (2022) that these resources do not replace teachers and their role in the teaching and learning process, they should be integrated into it as means for accessing information, participating, and interacting in the performance of learning tasks.

In fact, with the great availability of information and easy access for students, if they have digital resources with internet connection, exhibition teaching cannot continue to be the only one in the classroom, with which students access the knowledge transmitted by teachers. The construction of the learning that students need for the continuation of studies and for their personal and social life, using digital technologies linked to the Internet, learning results from processes of research, reflection, and action in collaboration with classmates and the teacher.

The computer, tablet and smartphone connected to the internet are technological resources with which students can access, save, and analyze information, learn by taking quizzes in the Kahoot App, produce texts, make PowerPoint presentations, and summarized videos of the learning performed, participate in the evaluation of their learning, and do self-evaluation.

## **5.4. The continuous and participatory assessment by students of their learning**

If learning results from a construction process of the student, either individually or in interaction with classmates and with the teacher in the resolution of tasks proposed by the teacher or discussed with them according to their interests and needs, their assessment must be continuous and with their participation. We intended that the evaluation would be seen by teachers and students as a practice that allows the latter to check their learning and improve it (Fernandes, 2022), that is, an evaluation for learning (Black & William, 2009).

An evaluation for this purpose is of a formative and training nature of the students, which takes as its object the processes of performing learning tasks, in which evaluation criteria are defined in advance and the respective performance descriptors with which students can self-evaluate their performance in these tasks, obtain feedback with indications on what and how to improve in them, and checking their learning process (Fernandes, 2022; Ferreira, 2022).

It is through self-assessment and self-checking of their learning that students are better learners, will have a better formation, and be more successful in summative assessment (Black & William, 1998).

## 6. Conclusions

Emergency remote teaching has led to adaptations of the teaching and learning process, with changes in teaching methods, learning tasks and the integration of digital technologies. In fact, through the study carried out (Ferreira & Bastos, 2022), it was possible to verify that the students surveyed reported the use of teaching and learning methods more focused on students' learning, involving them in work and research tasks that allowed them to build interaction and participate more in the evaluation of their learning.

It was from these students' perceptions that we elaborated a teaching and learning proposal for students in 1st cycle primary school post-Covid-19. In this proposal we highlight the importance of diversifying teaching methods focused on students and the learning they have to build, involving them in tasks/works of individual or small group nature, in which digital technologies are means to help them perform these tasks, and the need for students to participate in the evaluation of these tasks, so that they are able to check themselves and therefore become autonomous and responsible for their learning and reach deep and complex understanding.

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