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Distance Learning in Moroccan Primary School, Which Impact on Students' Parents

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***Abstract*—During the 2019-2020 school year, and from the beginning of the second semester, the Covid-19 pandemic has forced Moroccan schools to adopt distance learning. This has pushed those in charge of the educational sphere to use all available technological means to ensure pedagogical continuity and save the school year. Thus, the most used tools were: connected devices such as mobile phones, computers and tablets via applications such as WhatsApp and Zoom, and the broadcasting of courses on television channels. Parents are more involved in their children's learning process, as they are more likely to assist them in their learning. This article aims to investigate the state of play of this experience, and to highlight the reaction of parents to this practice, while shedding light on the obstacles that have hindered this type of teaching. To do this, we conducted exploratory research via an online questionnaire. The results, analyzed by SPSS 22 software, showed a great dissatisfaction of the parents and a marked demotivation of the learners towards distance learning. And that this teaching modality suffers from several handicaps that compromise its implementation.**

Keywords—Distance education, elementary school, Covid-19, parents' opinions.

I. INTRODUCTION

With the advent of new technologies and in particular the internet and mobile devices, teaching and learning has expanded greatly in most countries of the world [1-4]. The affordances offered by these artifacts [5] cited by [6], have given rise to different types of learning such as e-learning, mobile learning, or ubiquitous learning. Given the advantages that these types of learning can present, especially in their "distance" version [7-10], they are considered in developed countries as a support to face-to-face teaching and sometimes even an alternative to it.

Morocco has not escaped this influence of technology on educational practices, but it never took the step of experimenting with distance education in formal schooling before the period of confinement. This forced him to adopt such an approach to ensure pedagogical continuity of learning and save the academic year. This state of affairs has provided us with a concrete situation to examine the current state of affairs of distance learning in Moroccan schools, while highlighting the possible obstacles that could hinder such a practice; and also, to sound out the opinion of parents towards this teaching modality.

II. RESEARCH QUESTIONS

We have therefore tried through this article to answer the following research questions, limiting us to the parents of primary school learners:

- What is the state of play of distance education practiced during the Covid-19 pandemic by Moroccan elementary school?

- What are the obstacles that have hindered such practice?

- And what is the reaction of learners' parents to this teaching-learning modality?

III. METHODOLOGY

A. Participants

This study targeted parents of primary school students in the Beni Mellal-Khenifra region (one of the twelve regions of the Moroccan kingdom). To reach these participants, we used WhatsApp groups of parents' associations, through which we administered an anonymous online questionnaire via the survey platform "Google Forms". This questionnaire included both closed and open questions. We judged that this mode of transmission is more appropriate given the conditions of confinement dictated by the Covid-19 pandemic, forcing Moroccan education authorities to adopt distance learning to ensure the pedagogical continuity of learning. The number of respondents reached 97 of different ages (of which 44.33% are women), and different places of residence (16.5% live in rural areas and 83.5% in urban areas). Their education levels and those of their spouse cover a wide spectrum from less than third grade to more than

a bachelor's degree plus three. Figures 1 and 2 show the distribution of respondents by age and gender, and their educational levels and those of their spouse.

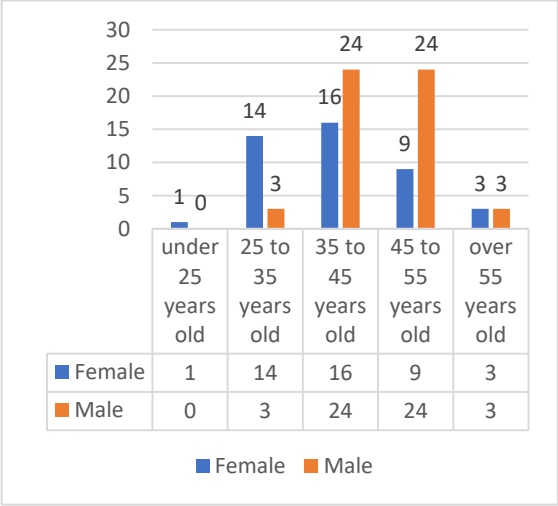

Figure 1: distribution of respondents by age and gender

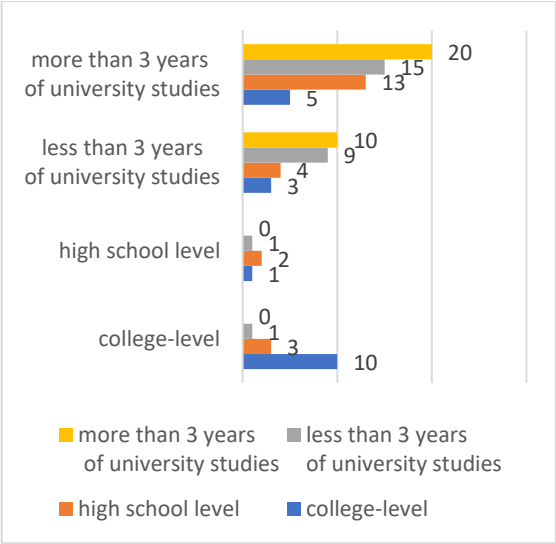

Figure 2: Distribution of respondents according to their educational levels and those of their spouses

B. Analysis of results

Quantitative data collected were analyzed by SPSS 22 software, and qualitative data from the open-ended questions of the questionnaire were processed manually. Eventual correlations were highlighted by Pearson's Chi-square statistic and, failing that, by Fisher's exact test [11-12]; and the strength of eventual relations was highlighted by Cramer's Phi coefficient [13]. The conversion of the results into graphical data was done by the Microsoft Office Excel application.

IV.RESULTS AND DISCUSSION

A. State of the situation

1) Tools used, tools preferred by learners and the most adapted tools according to parents.

Results show that during confinement, the majority of learners pursued their learning on smartphones (75.30%), followed by laptops (36.10%), and tablets (24.7%). While television and desktop computers were used by only 16.5% and 6.20% of learners respectively. This finding is explained by the ubiquity of cell phones in Moroccan households: According to the National Telecommunications Regulatory Agency (NTRA), the number of subscribers in mobile networks reached 49.42 million in 2020, with a penetration rate of 137.5% [14]. This mobile technology has several advantages: light and connected artifacts, affordable acquisition price, possibility to save the digital resources received to be reconsulted at anytime and anywhere, and possibility to interact with teachers. In addition, children are more attracted and seduced by the multiple applications offered by mobile phone technology. In contrast, television programs have to be seen at a specific time and do not cover the entire school curriculum. Moreover, they do not offer the possibility of interaction with the teacher.

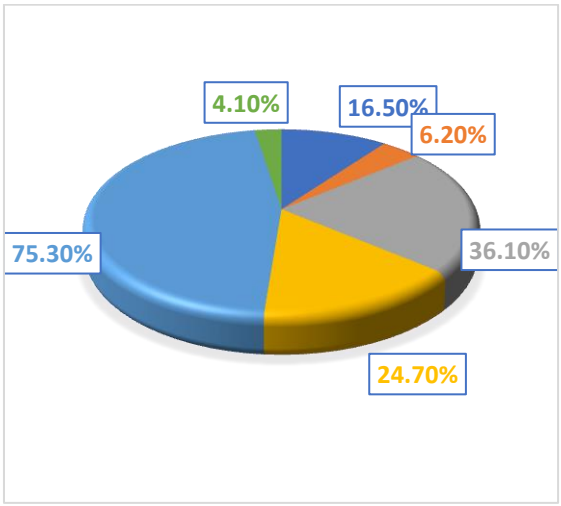

Figure 3: Tools used for distance learning

These results are confirmed by parents' answers to the question "what is your child's preferred distance learning tool?". Most of them said that their children are more likely to use mobile phones for learning (33%). Television was preferred by only 25% of learners, followed by laptop (22%), tablet (18%) and finally desktop (2%).

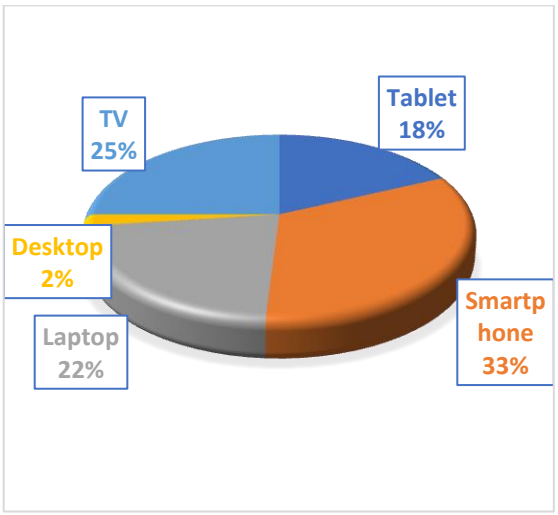

Figure 4: Tools preferred by learners

For their part, parents have a different opinion. When asked which tool they see as the most suitable for distance learning, 43.30% of parents favor laptops, 33.30% prefer the digital tablet and 28.9% prefer the television. But the smartphone, which is well preferred by learners, is only seen as suitable for learning by 20.6% of parents. They see that the smartphone could distract learners by the multiple applications it offers. In addition, children under the age of majority (primary school students) could misuse it. Thus, parents prefer tools that are both connected and offer the possibility of collaboration and sharing; and controllable to protect their children from misuse.

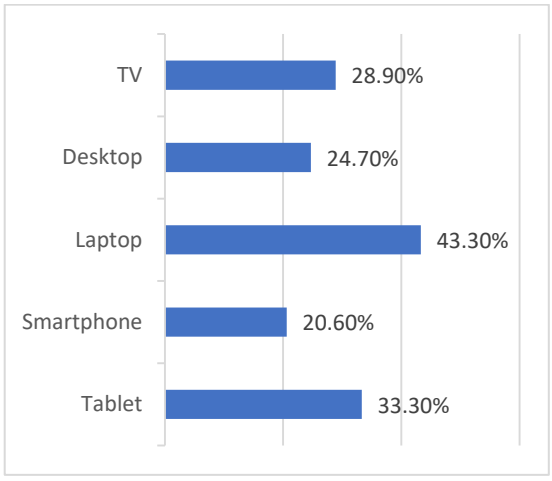

Figure 5: Most appropriate tool for distance learning according to parents

2) Assistance time provided to learners

Faced with fully distance learning, parents found themselves more involved in their children's learning process. The time spent helping learners assimilate their learning varies from zero hours (16.5%) to more than three hours per day (20.6%). 15.5% of parents are available for their children for less than one hour per day, 29.9% spend one to two hours per day helping their children, while 17.5% help their children for two to three hours per day. These results can be explained by the parents' free time, which varies according to the type of occupation of the respondent and his/her spouse. The level of education of both parents also has an impact on the support of children in their learning (see below in this article).

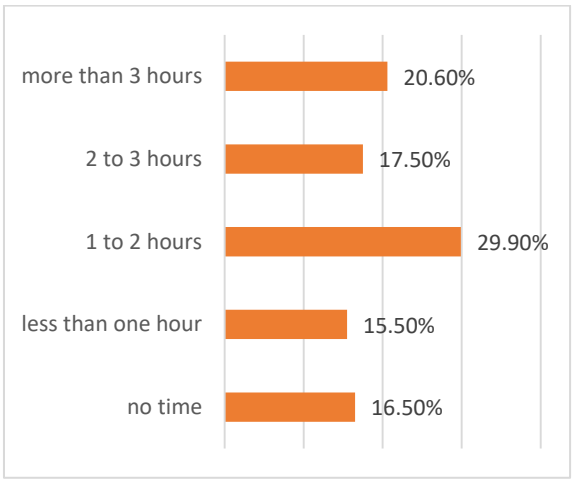

Figure 6: Time spent by parents to assist their children in their learning

3) Learners' interest in distance learning

Parents of students have indicated that their children are not interested in distance learning. This teaching method does not seem to arouse their interest. In fact, the majority of those questioned reported a low motivation of their children towards this learning modality (46.4%), or no motivation (18.8%); against 35% who noted an interest in this form of learning.

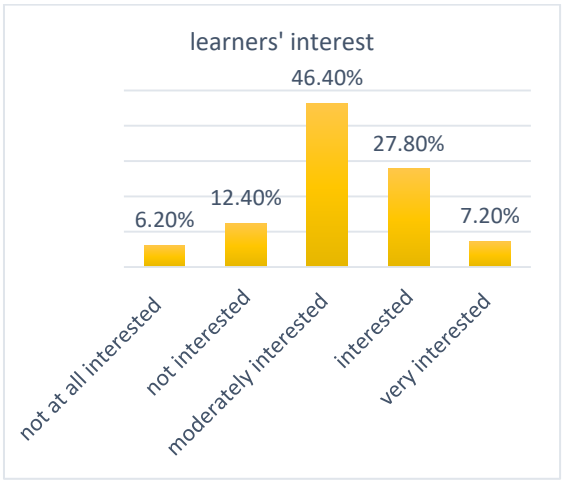

Figure 7: Learners' interest for distance learning

4) Parents' satisfaction regarding their children's distance education

Only 18% of participants declared their satisfaction with this teaching modality. While, almost half of the participants (47%), agreed that they were dissatisfied, of which 14% were very dissatisfied; while 35% were not very satisfied. This almost unanimous dissatisfaction is explained by the various obstacles and handicaps that hindered this teaching practice experience: learners found it difficult to adapt to such a practice in the absence of the teacher's cognitive and teaching authority, which created in them a de-motivation and disinterest in learning. Students are accustomed to interacting with their teachers during class, and asking questions to which they receive immediate feedback. The authority of the teachers pushes the learners to be up to date with the assignments and exercises required. All of these practices were not part of the distance learning experience during the pandemic period. Parents were not prepared for this type of school practice. They found themselves more involved in their children's education and consequently bore additional burdens: a daily follow-up with a time allotment for each child, a financial overload to connect and stay connected, and an update of their technical and cultural skills to be able to accompany their children in their learning in several distinct subjects.

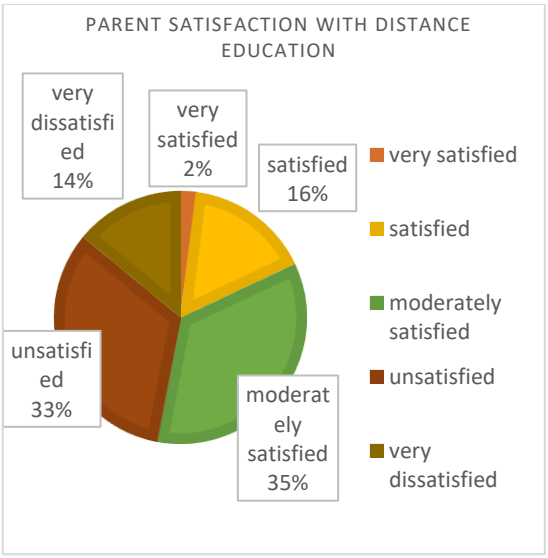

Figure 8: Parent satisfaction with distance education

5) Obstacles encountered

Respondents to the questionnaire in this research noted several handicaps that hindered their children's satisfactory learning. Most of them (42.3%) report a high level of disinterest in distance learning as practiced during the Covid 19 period. Other households report that they do not have internet coverage (25.8%) or cannot afford such technology (7.2%). 20.6% of participants reported the absence of adequate digital resources or their insufficiency for satisfactory pedagogical continuity of learning. Those who did not find any obstacle represent only 7.2% of the participants.

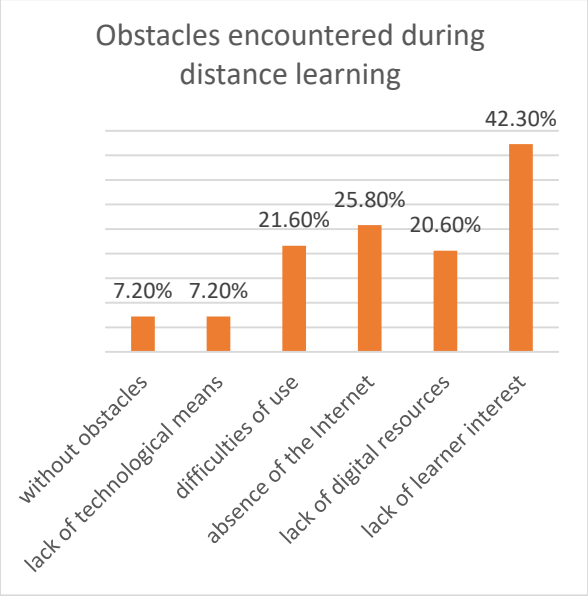

Figure 9: Obstacles encountered during distance learning

The responses to the open-ended questions in the questionnaire complete the list of barriers and limitations identified by parents in supporting their children's learning during the period of confinement. We have classified them into 5 categories:

- Technical obstacles

Technical aspects of the e-learning modality represented a limitation for several households. Several parents of students stated that they did not have stable network coverage and sometimes no coverage at all. Sometimes, even if the area has network coverage, households have poor reception. This forces learners to look for a place with good reception, usually on the terraces of buildings. Others reported the absence of electricity or even of adequate tools for this kind of teaching: smartphones, computers, etc. Parents who did not have them were forced to buy them, if their budgets allowed it.

- Organizational obstacles

Respondents stated that their children's learning flow and their teachers' support were poorly managed and very unorganized: sometimes the teacher sent their learners several documents in short periods of time and without any support, and sometimes the student received nothing for more than twenty days. The learners, being used to face-to-face teaching where the teacher directs the learning activities, felt lost all by themselves when faced with the documents received. The parents found

themselves forced to take charge of their children's education despite their ignorance of the pedagogical objectives of these documents and in the absence of any didactic knowledge.

- Pedagogical and didactic obstacles

Moroccan education system has never experimented with distance teaching-learning modalities in formal education. And teachers were not trained to this kind of teaching: creation of suitable digital resources, designing learning materials for distance learning, existence of sufficient digital resource banks for each school level ... etc. Surprised by the ministerial decision obliging all the actors of the teaching-learning operation to ensure pedagogical continuity at a distance, those in charge have hastened to produce digital resources as they could, far from the pedagogical and didactic quality required. The number needed to cover all school levels outweighed the quality. This had a negative impact on student learning.

- Cognitive obstacles

This forced experimentation with distance learning brought to light another type of obstacle related to knowledge and know-how in the field of information and communication technologies. Several respondents stated that they found it difficult to manipulate the files sent by the teachers (PDF, Word, PPT ...), or to navigate in options of the applications used (educational applications such as Java applets or those dedicated to communication and sharing such as Zoom or Teams). These skills have proven to be very necessary to be able to pursue distance learning. They are even classified as a prerequisite for any e-learning.

- Economic obstacles

In addition to the above obstacles, there are other economic handicaps. Some parents have been forced to buy smartphones for their children or share their own with them. Others, for fear of misusing them, have opted for tablets or laptops or even desktops depending on their budget. Other charges that add to the expenses consist of paying for constant recharging of smartphones and/or internet connection. A large proportion of households were not prepared for these additional costs, which forced a large proportion of learners to make do with television broadcasts despite their limitations and shortcomings

B. Correlation between the time spent helping learners and the profession of the respondent's spouse.

Results show a strong correlation between the time spent helping learners and the spouse's job. To highlight this correlation, we used the chi-square test; while the strength of this relationship was highlighted using Cramer's Phi statistic. The chi-square value is equal to 21.81 with a p-value of 0.039. But 10% of the cells revealed values less than 5. For this reason, we used Fisher's exact test [15]. The following table explains the results obtained.

Table 1: Correlation between the time spent helping learners and the profession of the respondent's spouse.

	Fisher's exact test	P value	Cramer's Phi
Value	20.02	0,039	0,475

Results are significant at the 5% level which confirms the link between the occupation of the spouses and the number of hours allocated to the accompaniment of the learners. The strength of this link is highlighted by Cramer's Phi which gave a value of 0.475. This indicates that the correlation in question is considerable. Indeed, results show that the learners who benefit the most from parental assistance are those whose parents have a high level of education, and either both are civil servants or one is a civil servant and the other is not. This proves on the one hand that parents with a low level of education cannot accompany their children in their distance learning. On the other hand, parents with a high level of education and their spouses without a job have the time and the competence to do it. The parents who are both civil servants have the financial means to ensure a more peaceful life and to be able to take care of their children.

C. Correlation between learners' interest in distance learning and their parents' satisfaction with this teaching modality.

The same statistic mentioned above showed us a link between learners' interest in distance learning and their parents' satisfaction with distance learning. The following table gives the values found for Fisher's exact and Cramer's Phi test, as well as the significance value of the relationship.

Table 2: Correlation between learners' interest in distance learning and their parents' satisfaction with this teaching modality

	Fisher's exact test	P value	Cramer's Phi
Valeur	37.369	0.000	0.682

The test is significant at less than 1 ‰, and the strength of this correlation is 0.68. This shows a very strong relationship between children's motivation

to learn at a distance and their parents' satisfaction. Most learners were demotivated, and showed disinterest in the lessons they received from their teachers. And parents found it difficult to accompany their unmotivated children in their learning. The technological artifacts used distracted them more than learning. In addition, parents do not have the authority of the teacher towards whom the learner has respect and fear. This state of affairs has doubled parents' efforts to make their children more engaged in their schooling.

V. CONCLUSION

In conclusion, the Covid-19 pandemic has shown us that the use of technology in teaching-learning operations has become inescapable. Although Morocco has invested heavily in the introduction of ICT in education, it is only at the beginning of experiments in distance learning. This study highlights several obstacles to the implementation of this modality in Moroccan elementary school. National educational authorities are called upon to create a favorable ecosystem for such a practice: production of adequate digital resources, specific pedagogical training for teachers, preparation and training of learners for this type of teaching, expansion of Internet coverage and facilitation of access for all Moroccan households, etc. Without an integrated environment for adequate distance education, the results of such a practice will be disappointing.

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