Digital Uses and Practices in Secondary School

Achieving Digital Literacy

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Abstract— **Our study focuses on the description and analysis of the digital activities that teachers and students engage in both in-person and online at Georges Seurat Middle School in Courbevoie, in the region of Ile-de-France, as well as the digital content that is made available to students in face-to-face, distance learning, and hybrid courses. In this context, our qualitative research is based on an average of 314 hours of observation across a variety of digital projects. This includes 80 hours per academic year beginning in 2021. We sampled 397 students in grades seven through ten. In addition to the qualitative investigation, the quantitative study's findings are the main focus of this paper. We questioned 200 pupils, ranging in grade from seven to ten, regarding their use of and behaviors with digital devices in both private and academic settings.**

Keywords- digital literacy; digital workspace; digital practices; digital education; media literacy; virtual learning environment; virtual collaborative system.

I. INTRODUCTION

Our qualitative research was conducted during educational sessions in the school's digital collaborative space, OZE92. Several digital projects have been established to enhance media and information education, including a fake news project, an O-Lab citizen project, and a media class. Students collaborate online to finish projects under the guidance of the teacher. 314 hours of observation between September 2021 and March 2024 were used to obtain the results presented in this paper.

The qualitative study's findings indicate how group work in the context of online collaborative spaces -OZE92- engages students in an active learning process, motivates them to complete their digital projects [1][2], and helps students who are struggling to feel like they belong to the collaborative group.

Furthermore, our research shows how the role of the teacher has changed throughout time. Teachers are no longer the only ones who can impart knowledge; students are now actively involved in creating it. The supervisor's position has evolved from that of the teacher. This research is based on 314 hours of observations that were completed within OZE92's [3] collaboration spaces. In addition to the quantitative data that we reported in our previous work [14], this paper gives the findings of the qualitative investigation.

Taking group sample of pupils', teachers', and parents' digital behaviors and uses in both public and private settings is the aim of this study. This could provide us with an extensive knowledge of the requirements and expectations for education with the goal of gaining digital education [9] [10][12]. Consequently, is it feasible to discuss the development of digital literacy in higher education through analyzing the qualitative and quantitative findings of every member of the academic community? We have some responses to that question. The study's global analysis is currently in progress.

The rest of the paper is structured as follows. Section 2 covers the theoretical foundations of our research, Section 3 analyzes the qualitative study related to students, Section 4 discusses the limitations of our study, and Section 5 offers a partial conclusion of this research.

II. SCIENTIFIC POSITIONING

As stated in [11], our research highlights the principles of the "constructivist" approach to communication sciences and has connections to educational sciences.

The Anthony Giddens and Poole Scott Adaptive structuration theory serves as the foundation for this work [4]. AST theory focuses on the rules, resources, and social structures offered by institutions and technologies as the foundation of human behavior. Action frameworks and technology frameworks are always connected.

The authors of [5][6] and [7] present the idea of Personal Learning Environment (PLE), which puts the student at the center of the system. It is an ecosystem or collection of tools that supports learners in planning and organizing their learning.

Furthermore, Moore and Marty [8] were able to comprehend that learners need to be more autonomous depending on how extended the transactional distance is, according to the notion of transactional distance.

A transactional distance learning program needs to include a structure, an interaction, as well as a degree of autonomy for its students.

III. QUANTITATIVE RESULTS -STUDENTS

200 school students in grades seven through ten were asked about their digital practices and uses [12]. Students were questioned within the context of the quota technique [13]. The quota method is a sampling strategy in which distinct targets or quotas are set for different groups within a

population according to particular criteria. These quotas are intended to make sure that, in terms of those attributes, the final sample reflects the diversity of the population. In our case study, a sampling method was employed to select a subset of students for investigation from a total population of 600. Specifically, 200 students were chosen for participation. To ensure representation across various grade levels, 50 students were selected from each grade level, ranging from seven to ten grade.

Inside the private environment, 98% of students have access to the Internet at home (Figure 1) and are given the essential digital equipment. 35% of them have more than four smartphones available at home. 56% possess one tablet, 33% one laptop, 60% are connected to a game console, and 65% have desktop computers.
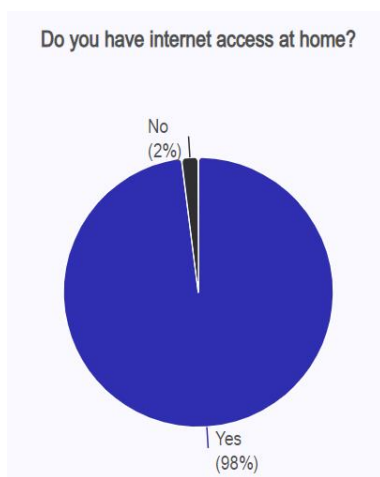

Figure 1. Internet access at home.

90% of students have a smartphone as their personal device, whereas 63% use a laptop. In their rooms, 79% of students set up their own digital devices.

They are connected daily (95% of the week), with 60% of them being online more than one hour per day. Students use the Internet primarily to chat with friends (73%), consult OZE92 (76%) and play online games (66%).

During the week, students consult the following sites in particular: YouTube (80%), OZE92 (78%) and social networks (75%). 93% of students use the Internet on Saturdays and Sundays. 65% of them stay online for more than an hour, mostly to watch videos on YouTube (79%), communicate with friends on social networks (75%), to play games online (67%) and, in fourth place, to consult OZE92 (65%). YouTube (80%), social networks (78%), and OZE92 (65%) are the most frequently visited websites on weekends.

86% of students use social media, particularly WhatsApp (92%), followed by Snapchat (78%), TikTok (76%), and Instagram (70%). Social networks are mostly utilized for interacting with friends (98%), keeping up with the news (62%), and watching videos on various topics (Figure 2).
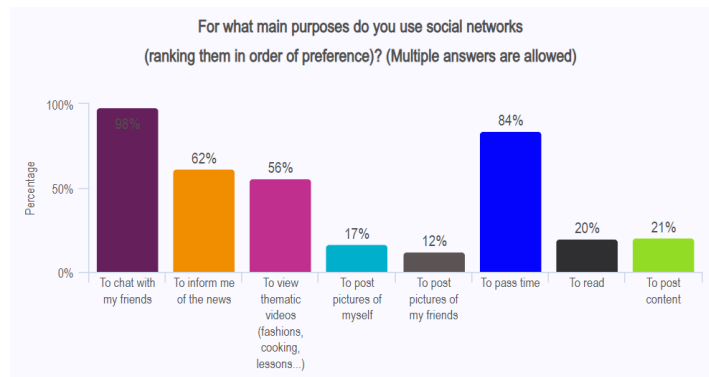

Figure 2. The purposes of social networks' uses.

In the classroom, the Internet is used primarily in technology (83%), mathematics (47%), sciences and English subjects (28%). Most of the digital equipment used in the classroom are ultra-portable computers (85%) and desktop computers (73%). Lessons (91%) and exercises (90%) constitute the majority of the digital content displayed in the classroom. Teachers often request digital outputs in the form of slideshows (87%), videos (38%), and audio files (35%). Most of the digital assignments that teachers give are document-based research (78%) and activities (70%).

Wikipedia is considered as a primary documentary source for carrying out research (91%), with YouTube following in the second (65%) and social networks in the third position (67%). Students use the OZE92 content for exercise resolution (76%) and course revision (72%). When it comes to documentary research, Wikipedia (82%) and OZE92 (65%) are still the most often utilized resources in the classroom for activities and revision courses, respectively. 51% of students use YouTube as a resource, placing it in a third place.

VI. STUDY'S LIMITATIONS

A few methodological issues with the selection of the student sample were present in our study. We would have preferred a random sample that was "statistically ideal" according to De Singly [13] as each member of the population surveyed must have an equal probability of being included in the sample. However, it was logistically unfeasible to present the survey to randomly selected students considering the constraints imposed by school scheduling.

V. CONCLUSIONS

According to our qualitative study, we have learned more about the digital profiles of teenagers attending Georges Seurat School. The data gathered shows that teenagers are well-equipped, especially in terms of smartphones (90%). They are daily connected (95%) on a week, 60% among them are online more than one hour per day. They frequently utilize the internet for both academic and personal purposes. They mostly use the internet for OZE92 consulting (76%), and social media conversation

with friends on networks (73%), with Instagram, TikTok, and Snapchat being the most popular platforms. Wikipedia and YouTube are the primary resources in the context of document-based research, both at home and in the classroom. Digital contents in the classroom specifically refer to lessons and activities that are projected onto a screen via a video projector. In this context, teachers specifically request digital research and activities.

These first quantitative findings may be applied to secondary schools that have students with similar characteristics (age, school level, social environment, etc.) and access to adequate digital resources both at home and at school. The response from the teacher questionnaire will be merged with the current data to determine whether the school has a well-established culture of digital literacy. These outcomes could be used, furthermore, by officials to enhance school programs and make greater use of digital technologies for education.

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