

# Digital Uses and Practices in Secondary School

## Achieving Digital Literacy Digital Collaborative Space (DCS)

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**Abstract**— Students' and teachers' digital uses and practices in the frame of Digital Collaborative Space (DCS) at Georges Seurat Secondary School in Courbevoie, France, will be discussed in our paper. In this context, our qualitative research is based on an average of 240 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 6 through 9.

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

### I. INTRODUCTION

Our qualitative research is based on observations conducted during instructional sessions in OZE92 [1], the school's Digital Collaborative Space. As part of media and information education, several digital projects [2][3], including the media class, have been launched. Students use synchronous collaborative documents to construct projects while working online under the teacher's guidance. Our ecosystem-based teaching model is founded on the constructivist approach, the Adaptive Structuring Theory (AST) hypothesis [4], the Personal Learning Environment (PLE) [5][6][7], and the notions of educational and pedagogical innovation associated with André Tricot [8][9]. How are Digital Collaborative Spaces (DCS) used to organize, and shape social interactions, digital competencies, and knowledge in the classroom and online? Understanding, examining, and quantifying the obstacles to digital behavior and tool adoption in the educational setting are the main goals of our qualitative research.

### II. SCIENTIFIC POSITIONING

Our research emphasizes the principles of the "constructivist" approach to communication sciences and has connections to educational sciences in "Communication studies: Constructivist approaches" by Alex Mucchielli and Claire Noy [10].

This work is built on the Anthony Giddens and Poole Scott (AST) hypothesis. As the foundation for human action,

AST theory highlights the social structures, laws, and resources given by institutions and technologies [4]. Technology frameworks and action frameworks are continuously linked.

Along with Graham Attwell [5], 2006, and Mark Van Harmelen, 2006 [6], who place the student at the heart of the system, PLE stands for Personal Learning Environment. It is a set of tools or an ecosystem that helps learners create and organize their learning.

### III. QUANTITATIVE STUDY'S OBSERVATIONAL FRAMEWORK

We are in the school's DCS. The education community, including teachers, students, parents, and administration, has access to this space. This is where they can exchange, share, communicate, learn, be informed, etc. In this space, we set up the model. It contains Alex Mucchielli's four elements of the situation, teachers and students as actors. It also contains the context, the project, and finally, the equipment DCS (Figure 1).

All these elements are connected by the different processes proposed by Alex Mucchielli, which are: action-process logic, which links a project to the device, the process of projecting action forms, which links the project to the context, interactional practice procedures, which link students to the device and, finally, the positioning process, which links students to the context.

These processes set up interactions between all these elements, which lead to the emergence of meaning correlated to students' cultural, social, and individual environments. In addition, feedback between peers and between students and teachers is part of this model. This enhances instruction, increases knowledge, and promotes new digital abilities.

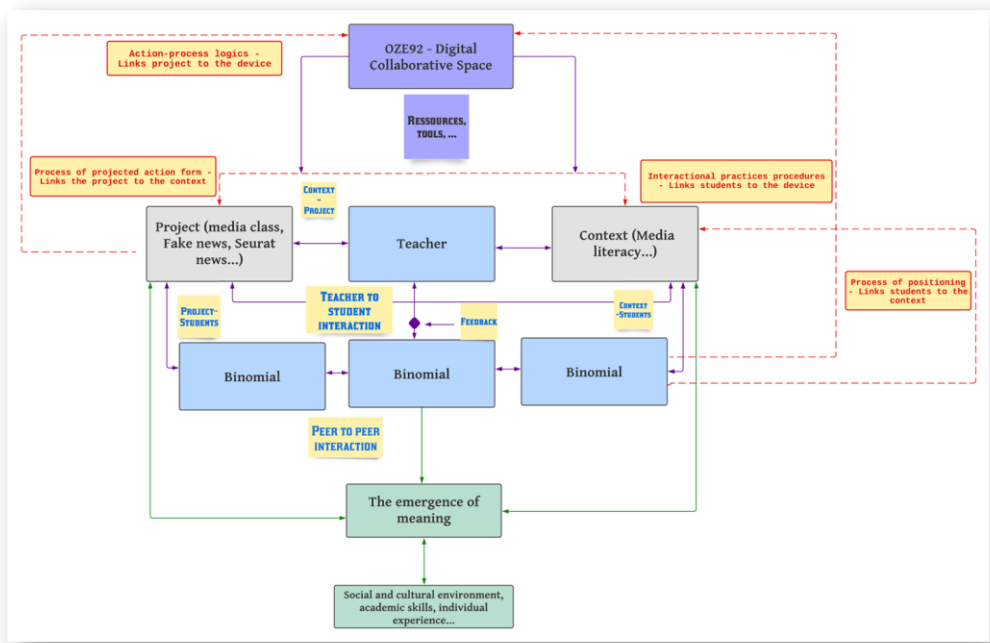


Figure 1. Qualitative study's observational framework.

#### IV. DIGITAL COLLABORATIVE PROJECTS

We have established several projects within this framework. O Lab Citizen, WebTV project, Fake News project, European Language and Culture project, etc. An example of the Media Class project is shown in Figure 2.



Figure 2. Media Class digital space.

This image in Figure 2 illustrates the Digital Collaborative Space (DCS) accessible through the School's Digital Workspace (SDW). It is a yearly class project in DCS using synchronous documents. Students in the 6th grade receive one/two hours of training per week on topics such as the online documentary research method, the criteria for validating online information, the different press articles, the inverted pyramid, copyright, image rights, etc.

The project aims at the following:

- Develop student collaboration.
- Gain experience working in groups.
- Students shall be trained in media education.
- Enhance the student's ability to think critically regarding digital information.
- Start with journalistic writing.
- Learn technical digital skills (word processing, document sharing, etc.).
- Learn to work individually and remotely.
- Discover how to use internal documentary resources (GDPR – General Data Protection Regulation).

#### V. QUALITATIVE RESULTS

A pair of students collaborate on a synchronous document to develop their WebTV project. We provide them with tools, resources, instructions, etc. The teacher and students still have online access to the project. Significant outcomes to elaborate on are as follows: Digital Collaborative Space encourages student social engagement. All the components of the DCS play a fundamental role in achieving the intended educational objectives [9]. According to Alex Mucchielli, the learning situation is made up of the project, the context, the actors, and the digital device (Figure 3). Interactions between each of these elements explain how students learn and why this process makes sense.

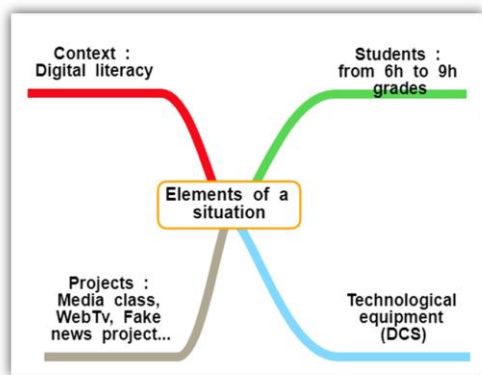


Figure 3. Elements that constitute a situation (Alex Mucchielli).

## VI. CONCLUSIONS

Collaborative work is being developed inside the DCS framework. In a safe environment, students are given resources and directions from the teacher. Social engagement among students is active. These characteristics place students in an excellent position for academic success. The quantitative study is going to enhance our research this year.

## REFERENCES

- [1] OZE92, <https://enc.hauts-de-seine.fr/my.policy>, [retrieved: June 2023].
- [2] J. Boissière and E. Bruillard, "The digital school: a constructible and immersive learning environment", Ed. Armand Colin, 2021, p. 367.
- [3] R. Hétier (Directed by), "Education's use of digital technology", Ed. Le bord de l'eau, 2021, p. 253.
- [4] M. Bia Figueiredo and A. Adrot, "Gerardine DeSanctis and Marshall Scott Poole - The founders of adaptive structuring theory" in "Great Authors in Information Systems", 2018. p.291 – 309.
- [5] G. Attwell, "Personal Learning Environments-the future of eLearning?", [https://www.researchgate.net/publication/228350341\\_Personal\\_Learning\\_Environments-the\\_future\\_of\\_eLearning](https://www.researchgate.net/publication/228350341_Personal_Learning_Environments-the_future_of_eLearning), [retrieved: June 2023].
- [6] O. Liber and M. Johnson, "Personal Learning Environments", [https://www.researchgate.net/publication/220095391\\_Personal\\_Learning\\_Environments](https://www.researchgate.net/publication/220095391_Personal_Learning_Environments), [retrieved: June 2023].
- [7] D. Gillet, "Personal learning environments: learners in control", In "Learning with Technology", 2010, pp. 193-201.
- [8] A. Tricot, "Educational innovation: myths and realities", Ed; Retz, 2017, p.160.
- [9] A. Tricot, <https://www.canotech.fr/a/enseigner-avec-le-numerique-esprit-critique-et-travail-collaboratif>, [retrieved: May, 2023].
- [10] A. Mucchielli and C. Noy, "Communication studies: Constructivist approaches", Collection U, Ed. Armand Colin, 2005, P.240, chap. 9, pp. 165-189.
- [11] E. Morin, The seven pieces of knowledge known for future education, Ed. Seuil- UNESCO 1999, p.71.