

Studying the use of classroom space by teachers and pupils in an urban school in Portugal (Eugénio de Castro School)

Context:

School location	Coimbra, Portugal
Details about students	Students from the 5th to the 9th grade (between 10 and 15 years old). Currently it works at maximum capacity relative to student intake, with 938 students.
School premises	Eugénio de Castro School was built in 1972. It is composed by several pavilions.
School context	The school is located in one of the newer centres of the city, in a sector predominantly inhabited by the upper and upper-middle social classes.
Type of activity	Reformulation of outdoor and indoor spaces to support students.
Stage in design process:	This school is being used, but in need of deeper intervention, which is being planned.

Tool used

Cartographic Observation

<https://www.ncl.ac.uk/cored/tools/cartographic-observation/>

Rationale for activity and tool adopted

Class observation is a very important instrument for understanding teaching and learning processes in schools when the results of observations are analyzed based on the theory of teaching and learning. In this context, there are two useful questions for classroom observation in the connection between space, teaching and learning: How do teachers use the space for teaching? How do students use their rooms for learning?

The aim of combining mapping and description in the use of the classroom is to analyze the impact of the existing learning spaces on the practice and activities of teachers and students.

Considering the level of decay existing in the different spaces of Eugénio de Castro School, this tool will allow us to understand its effective impact towards educational dynamics and classroom occupation.

Case study description: Process

The cartographic observation held at the Eugénio de Castro School took place on 12th and 14th January 2022, with two classes of the 9th year, a Spanish lesson that took 45 minutes, and an Arts lesson that took 90 minutes:

- Spanish lesson (45 minutes)
- Arts lesson (90 minutes)

Prior to the realization of this activity in the classroom, the researchers informed both the teachers and the students about the context of this research, its purpose and relevance.

Case study description: Process

The observation undertaken was supported by an array of activities consistent with the structuring of the interactions present in the classroom, namely:

- (1) **Introduction** (start of the teaching-learning sequence);
- (2) **Teacher-centered teaching** (teacher lecture, introduction to a topic...);
- (3) **Students focused on their task** (individual, partner and team work);
- (4) **Transition** (activities between work phases);
- (5) **Conclusion** (final phase of the teaching-learning sequence).

Thus, in order to capture this cluster of activities, all interactions were recorded using a stopwatch, which allowed a confluence between the type of activity, its positioning and the period of time dedicated to it.

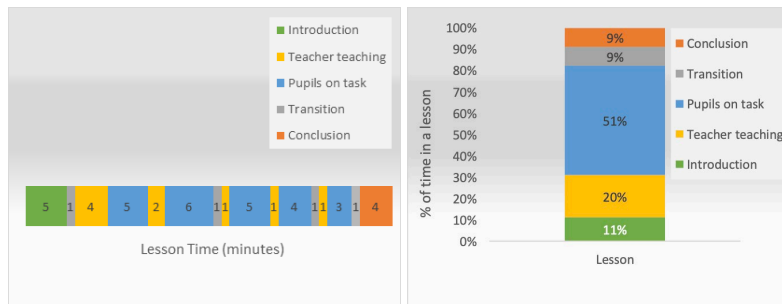
At the same time, movements and activities of both the teachers and the students were mapped on a plan of the classroom, considering the clusters of activities identified above, to which action/interaction notes were added.

The interactions were inserted in the classroom plan, and their temporal duration was also recorded. The lesson profiles were systematized with a vertical bar chart and the percentage of activities was represented in a cluster column.

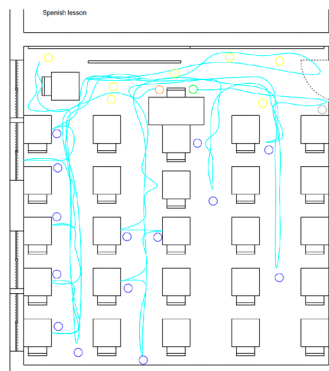
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Case study description: Outcomes

The results achieved with the cartographic observation of the **Spanish class** allowed us to observe a great dynamism in the way the teacher guided the teaching-learning process, with a considerable alternation and variability between the different moments/stages of work, as observed in the cluster column. In fact, it should be noted that, in more than half of the class time (51%, corresponding to 23 minutes), the students experienced a more participatory work (reading, oral response to questions pasted by the teacher, etc.), contrasting with only 20% of the work time centered on the teacher. Less expressive percentages were recorded at the introduction (11%), on the transition between activities and on the conclusion, both of them occupying 9% of class time.



In regard to the displacement of the teacher in the classroom, the plan reported that he / she moved around significantly, in a more scattered manner throughout the whole classroom for supporting the students' individual work. On the contrary, when the activity is centered on the teacher, her positioning is at the top of the classroom near the desk and the board, and in front of all the students. Students sat on their places for the all lesson.





ESCOLA EUGÉNIO DE CASTRO

9th grade | Spanish class (45 minutes)

CARTOGRAPHIC OBSERVATION

Cluster of activities to structure the interaction:

(1) **Introduction:** Start of the teaching-learning sequence

(2) **Teacher-centred teaching phases:** e.g. teacher lecture, introduction to a topic

(3) **Pupils in their task:** individual, partner and team work

(4) **Transition:** activities between work phases

(5) **Completion:** final phase of the teaching-learning sequence

12th January, 2022

9:15am – 10:00am

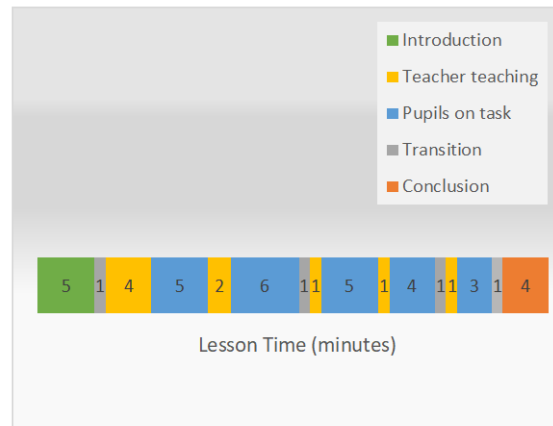


Fig.1 Lesson's Profile

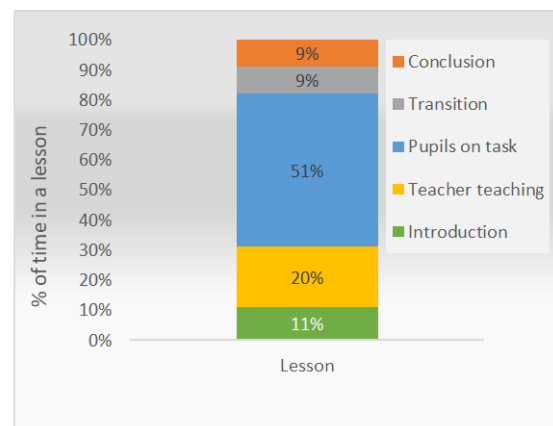


Fig.2 Cluster Column

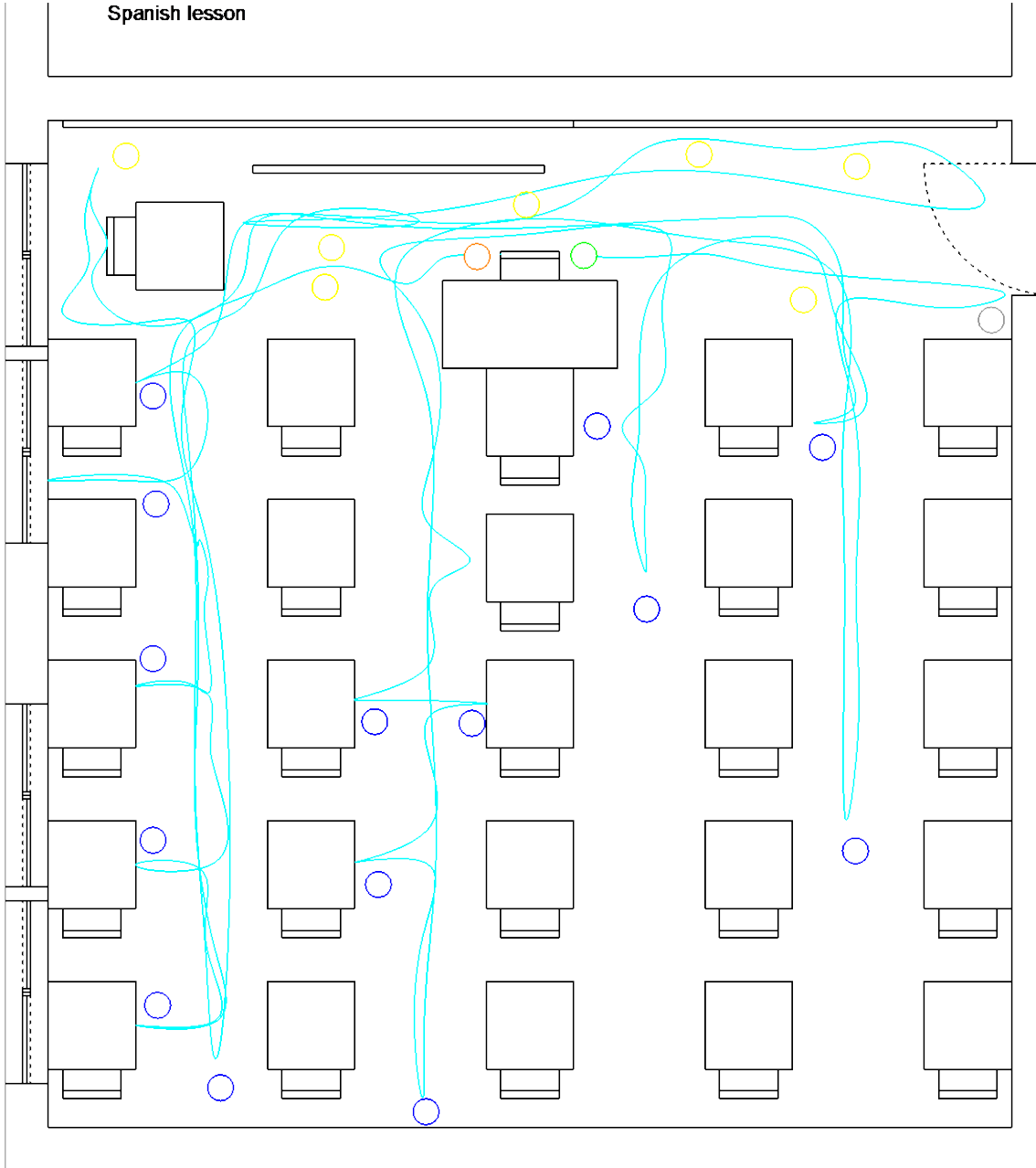


CARTOGRAPHIC OBSERVATION

Eugénio de Castro School - Basic School

12th January, 2022
 9.15 am - 10.00 am
 9th grade - 25 students

Spanish lesson



- Teacher
- Students
- Introduction: Start of the teaching-learning sequence
- Teacher-controlled teaching phases: e.g. teacher lecture, introduction to a topic
- Pupils in their task: individual, partner and team work
- Transition: activities between work phases
- Completion: final phase of the teaching-learning sequence

