

The use of classroom space by teachers and pupils in a peri-urban school in Portugal

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 533 students.
School premises	Rainha Santa Isabel School was built in 1999. It is composed by three parallel blocks with two floorplans and another building for the canteen.
School context	The school is situated in a peri-urban area, which encompasses a large rural area to the north of the municipality, located in socially and economically deprived areas, ones in which poverty and social exclusion are common, and in which violence, behavioural problems, neglect and academic underachievement are rife.
Type of activity	Reformulation of outdoor and indoor spaces to support students.
Stage in design process	This school is being used, but aiming for a reflection about its space, which has already been authorized by the Municipality.

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 urgent need to reconfigure the interior and exterior spaces of Rainha Santa Isabel School, the implementation of the Cartographic Observation tool will be very revealing of the influence of the quality of school spaces on educational dynamics and classroom uses.

Case study description: Process

The cartographic observation held at the Rainha Santa Isabel School took place on 19th January 2022, with two classes of the 9th year, both with a duration of 45 minutes:

- **Arts lesson** (45 minutes)
- **Portuguese lesson** (45 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).

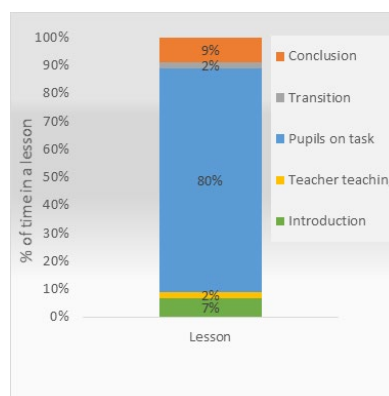
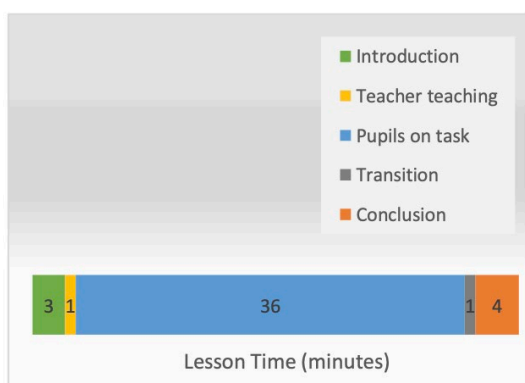
Thus, in order to capture this cluster of activities, all interactions were recorded using a stopwatch, which allowed a confluence between the type of activity, its positioning and the period of time dedicated to it.

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.

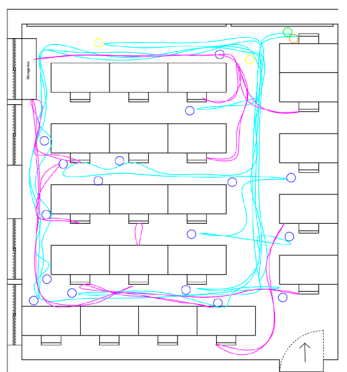
The interactions were inserted in the classroom plan, and their temporal duration was also recorded. The lesson profiles were systematized with a vertical bar chart and the percentage of activities was represented in a cluster column.

Case study description: Outcomes

The results achieved with the cartographic observation of the **Arts lesson** class proved the expected tendency of that this subject holds a more practical and dynamic approach. In this sense, it was found that 80% (36 minutes) of the class time was directed to the autonomous work of the students (individual and group tasks), identifying only 2% of teacher-centered teaching. The introductory moment of the class lasted 3 minutes, occupying 7% of the total time, the transition between activities occupied only 2% of the class and, finally, the conclusion lasted a total duration of 4 minutes (9%).



The analysis of the movements within the classroom, which has been mapped on the plan, also proved that this lesson generated a great dynamic and that all participants have moved around. Naturally that during the teacher-centered phase, the teacher was placed at the top of the classroom, near the desk and the board, but he/she also circulated to support students' individual work.





RAINHA SANTA ISABEL – BASIC SCHOOL

9th grade | Arts Lesson (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

19th January, 2022

9:25am – 10:10am

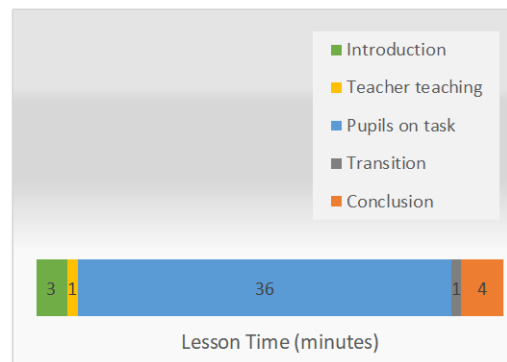


Fig.1 Lesson's Profile

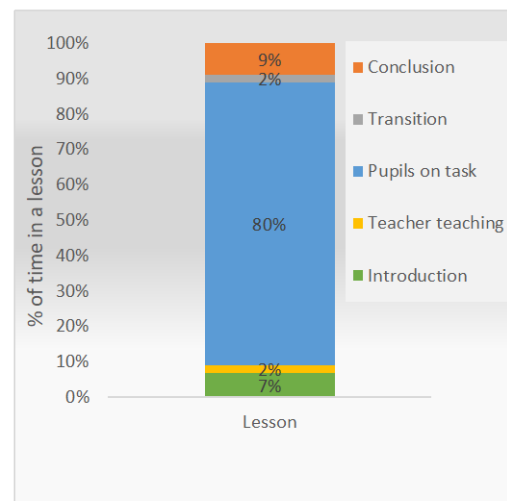


Fig.2 Cluster Column



CARTOGRAPHIC OBSERVATION

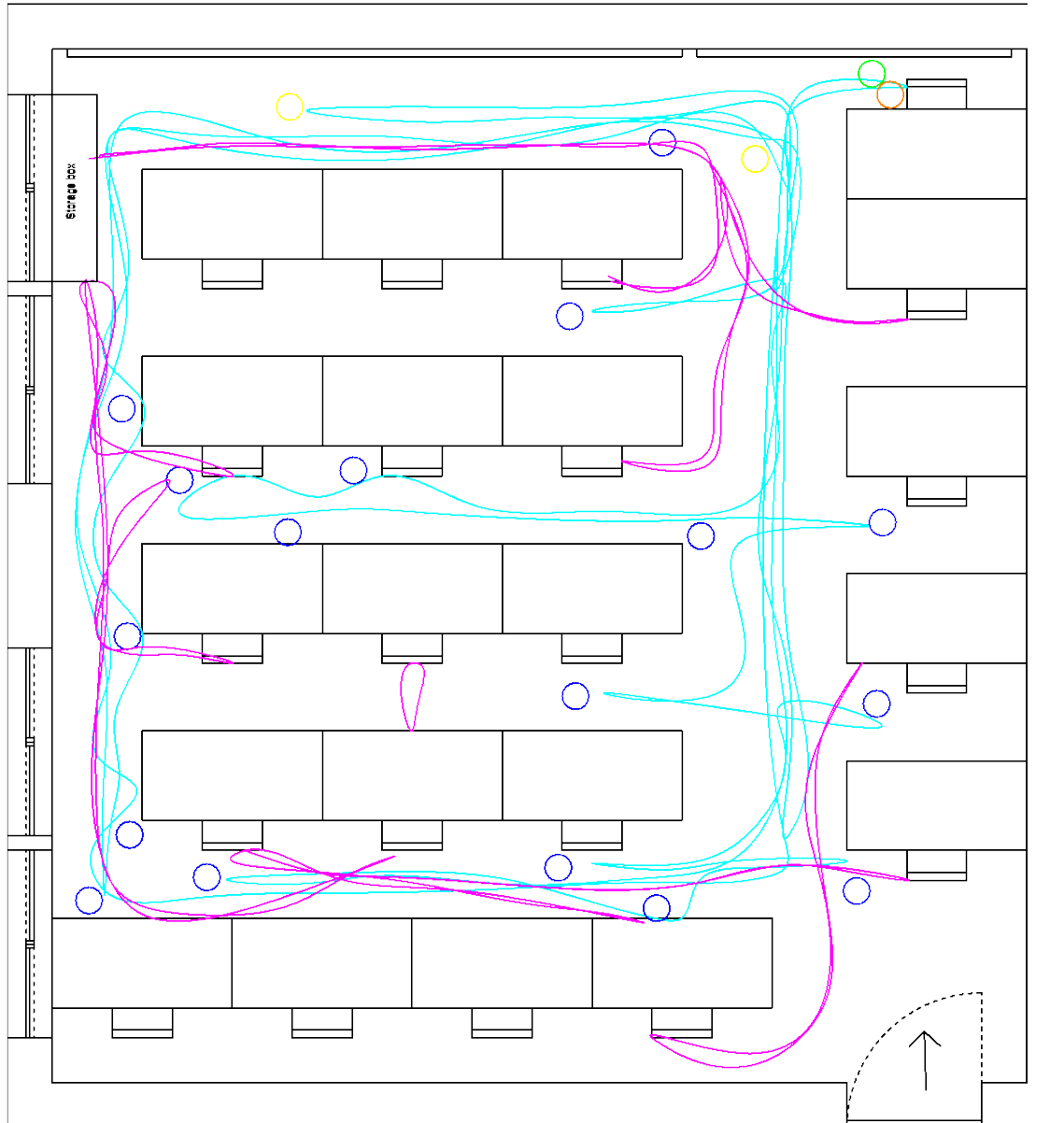
Rainha Santa Isabel School - Basic School

19th January, 2022

9.25 - 10.10 am

9th grade - 20 students

Arts lesson



- Teacher — Students
- Introduction: Start of the teaching-learning sequence
- Teacher-centred 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

