

# INPLASY

## Analysis of teachers' visual behaviour on student performance in classes: A systematic review

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### ADMINISTRATIVE INFORMATION

**Support** - No financial support.

**Review Stage at time of this submission** - The review has not yet started.

**Conflicts of interest** - None declared.

**INPLASY registration number:** INPLASY2024120086

**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 20 December 2024 and was last updated on 20 December 2024.

### INTRODUCTION

**Review question / Objective** Collect and systematize the analysis of teachers' visual behaviour on student performance in classes.

**Rationale** One of the biggest challenges in teaching is classroom management, namely the need to effectively observe and analyse the behaviour of students, each with their own particular characteristics, encouraging active involvement in their learning process.

Teachers are required to have a "keen" visual perception of the classroom environment in its most varied contexts and situations, and this ability is fundamental, not only for managing the session, but also for assessing the learning and performance of those involved.

From this perspective, eye tracker glasses, which record eye movements and track the position of the pupils at every moment, make it possible to know where the participant is looking.

This methodology has been used for different purposes in the educational context, such as correlating the teachers' visual behaviour with aspects inherent to the individual characteristics of the students (examples: their levels of competence, their need for support in the learning tasks proposed, their role in the educational context, the off-task behavioural issues observed, the classroom management problems that arise from this and the relationship between the teacher and the students).

In view of the above, a methodological approach that brings together all these studies could be relevant at a scientific level for the Sports Sciences' area and also, at the same time, for the teachers' educational training.

**Condition being studied** Teachers' visual behaviour on student performance in classes.

### METHODS

**Search strategy** . Terms - ("eye tracking" OR "eye tracker") AND ("teacher" OR "teaching") AND

("visual behaviour" OR "visual focus" OR "visual attention" OR "eye gaze" OR "professional vision");

. Eletronic databases - Biblioteca do Conhecimento Online, Educational Resource Information Center, ScienceDirect, Scopus, Teacher Reference Center and Web of Science.

**Participant or population** Primary, secondary and university teachers.

**Intervention** Teachers using eye tracker equipment in educational context.

**Comparator** Not applicable.

**Study designs to be included** Observational and experimental studies.

#### **Eligibility criteria**

- Published works between 1st January 2015 and 20th December 2024;
- Works written in English, Portuguese, Spanish or French;
- Articles published in peer-reviewed journals;
- Articles in full-text;
- Researchs that used eye tracking apparatus;
- Researchs where teachers' visual behaviour was one of the dependent variables in the experiment.

**Information sources** Eletronic databases - Biblioteca do Conhecimento Online, Educational Resource Information Center, ScienceDirect, Scopus, Teacher Reference Center and Web of Science.

**Main outcome(s)** Author(s), title, aim(s), participants, independent variable(s), eye tracking apparatus, school subject(s), education level(s), outcome(s), results and conclusions.

**Data management** Data management, protection and access will be carried out under the terms of the legislation in force, namely the General Data Protection Regulation, and it will be stored, managed and archived in a password-protected folder known exclusively to the research team, on a computer located in a room with restricted access to laboratory researchers.

**Quality assessment / Risk of bias analysis** The quality of the primary studies will be assessed using the ROBINS-I tool.

**Strategy of data synthesis** The article selection process followed the following steps:

- studies that used the descriptors in the aforementioned databases;

- exclusion of duplicate articles;
- reading the titles and abstracts;
- reading and critical evaluation of the articles (this process, as well as the extraction of information from each one, will be carried out by two authors, independently to then be standardized, after analysis and comparison; in the case of differences, a third author will be called to analyze and issue his final decision).

**Subgroup analysis** Not applicable.

**Sensitivity analysis** The process of reading and critical evaluation of the articles, as well as the extraction of information from each one, will be carried out by two authors, independently to then be standardized, after analysis and comparison. In the case of differences, a third author will be called to analyze and issue his final decision.

**Language restriction** English.

**Country(ies) involved** Portugal.

**Keywords** Education; Eye tracking; Learning; Student performance; Teaching; Visual behaviour.

**Dissemination plans** Scientific publication.

#### **Contributions of each author**

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