

## Learning patterns and reading comprehension in primary education: a mixed methods approach

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### THEORETICAL FRAMEWORK

The analysis of learning patterns (Vermunt, 1998) has generated an interesting insight in Higher Education. However, this model has been scarcely analyzed in the field of Primary Education (Martínez-Fernández, et al., 2021). In addition, this line of research has been based almost exclusively on the use of a self-report questionnaire (the Inventory of Learning patterns of Students, ILS). Therefore, in this study we extend the research in this area with a **mixed methods approach** in the field of Primary Education. Thus, two contributions are oriented to enrich the line of research on learning patterns; on the one hand, Primary Education students who live in a socio-economically vulnerable territory; and on the other hand, we deepen the analysis of learning patterns using the semi-structured interview and the focus group for a joint analysis (meta-reflection) on the results obtained.

### METHODOLOGY

#### Participants

A total of 218 primary school students and their tutors (N=3) from 4th, 5th and 6th grades participated.

#### Context

The study was carried out in the periphery of the city of Murcia (Spain) in socially vulnerable areas.

#### Instruments

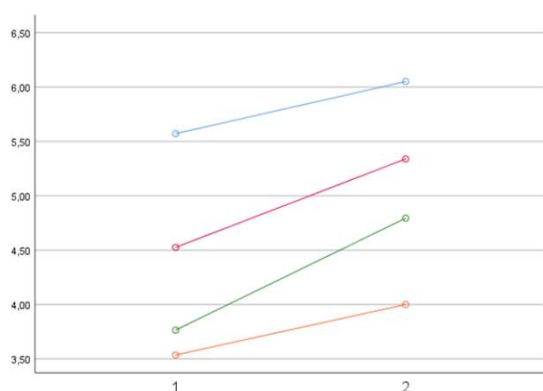
- ILS inventory
- Interviews with tutors
- Focus group with students and with teachers
- Reading comprehension test

We have focused on the role of learning patterns (pretest) in the explanation of reading comprehension (posttest).

**AIMS:** to discuss the contributions of mixed methods to the analysis of learning patterns in relation to reading comprehension as evidence of predictive validity.

### RESULTS

Figure 1.  
Reading comprehension scores according to learning patterns



Note: reading comprehension (3.5 to 6.5); 1= pretest 2= posttest; MD (blue), AD (red), RD (green); UD (orange).

It is a methodological approach that should even be adopted at different ages beyond Primary Education. The significant positive relationship of the MD pattern with the best results is confirmed, but the particularly negative effect of the UD pattern stands out (Martínez-Fernández, et al., 2021; Vermunt, 1998).

### DISCUSSION

Children with an **Undirected** pattern have the lowest, even worrying, results (see Figure 1). Afterwards, the focus group with students provided interesting data that allow for a deeper analysis of the patterns. For example, one student states about learning (pattern AD): "It's about whether it's something that we're going to use in everyday life and if it's going to be useful, because of course, if you're going to learn something that you're never going to use, you don't even need to...". Additionally, in line with Sordo (2017), it is appreciated, the need for the design of learning activities that connect the mother tongue with the host language. Students live, and feel as their own, another language that the school represses. In the case of children with a UD pattern this situation further worsens their academic performance, their own life. The focus group with the tutors was interesting because it activated meta-reflection on one's own teaching processes and the need to adjust/change in line with the individual needs of these students. It is concluded that the mixed methods approach provides relevant data in understanding learning patterns and highlights the relevance of joint discussion of the data (researchers and tutors) to define guidelines for future action, in this case related to reading comprehension.

