

EXPLORING THE ATTENTION DIMENSION OF PLANT AWARENES THROUGH DRAWING: FROM STEREOTYPES TO DETAILED OBSERVATIONS

Marcia Eugenio-Gozalbo¹, Inés Ortega-Cubero¹, Rafael Suárez-López² and Dawn Sanders³

¹Faculty of Education of Soria, University of Valladolid, Spain.

²Faculty of Education, University of Salamanca, Spain.

³Faculty of Education, University of Gothenburg, Sweden.



1 INTRODUCTION

Since Wandersee & Schussler (1999) coined the term *plant blindness*, reverting this phenomenon has become a major goal of biological education. Plant awareness is currently considered a multidimensional construct that reflects the level of an individuals' attention, understanding, and valuation of plants (Dünser et al., 2025).

Enhancing attention towards plants is a key challenger to foster plant awareness, and one effective strategy may be promoting their observation through drawing (Eugenio-Gozalbo & Ortega-Cubero, 2022). Here we posed a pre-instruction naturalistic drawing exercise on a freely chosen plant of the organic garden to pre-service teachers (PSTs) with the aim of unveiling the difficulties they face in drawing and perceiving plant structure and traits.

2 MATERIALS & METHODS

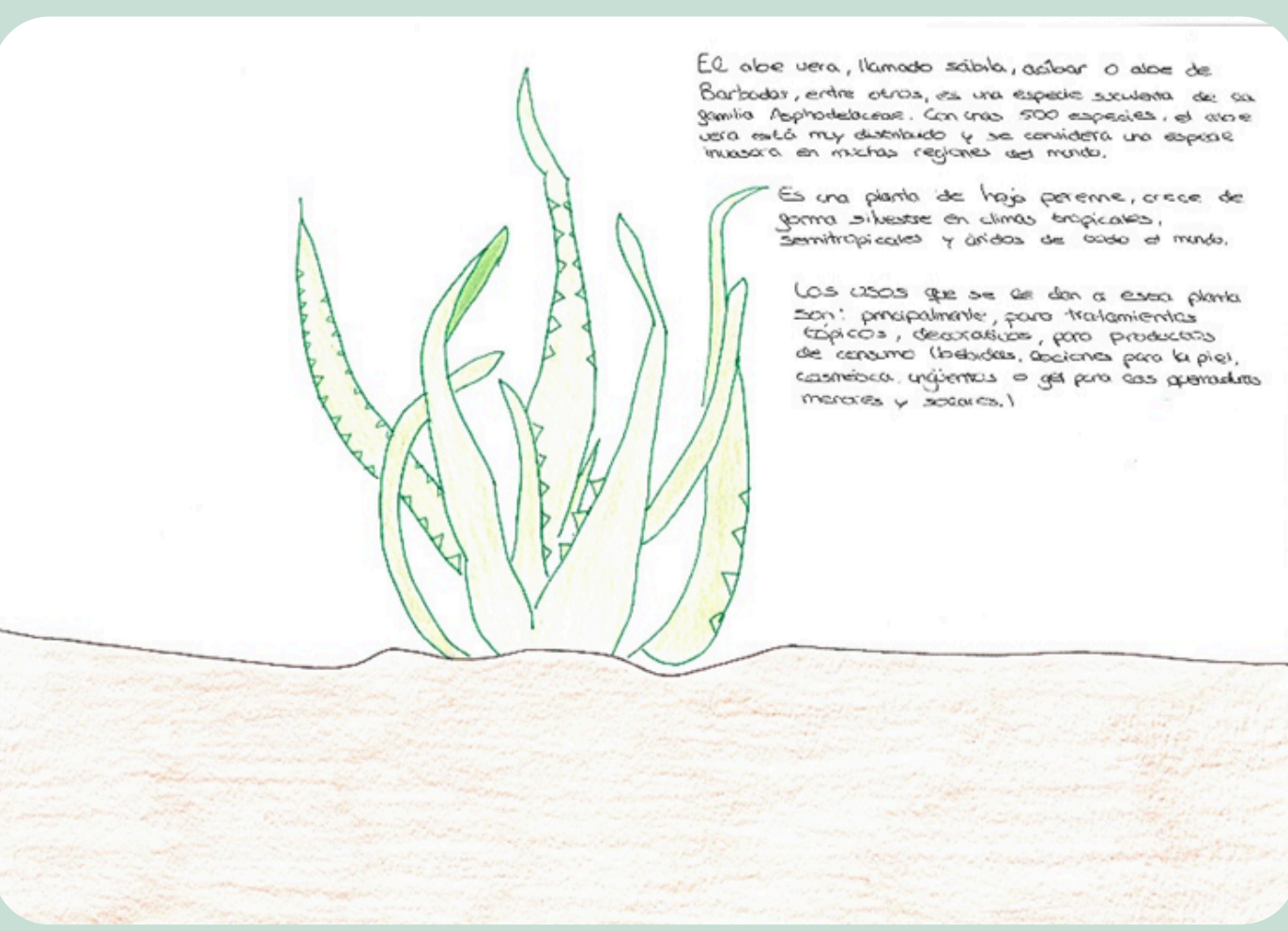
Context: A teaching-learning sequence designed to promote plant awareness (Eugenio-Gozalbo et al., 2025) was implemented with 39 PSTs. It combined artistic and scientific activities, both theoretical and practical, and was contextualized at the organic learning garden of the Faculty of Education of Soria. One of the departing activities was this naturalistic drawing exercise.

Analysis: Drawings and associated text notes were qualitatively analysed by two researchers using Grounded Theory, based on the constant comparison method. The sample was systematically and iteratively examined to identify emerging categories and subcategories of graphic representations. Text notes were categorised into three complexity levels (low, medium and high), based on the type and richness of information.

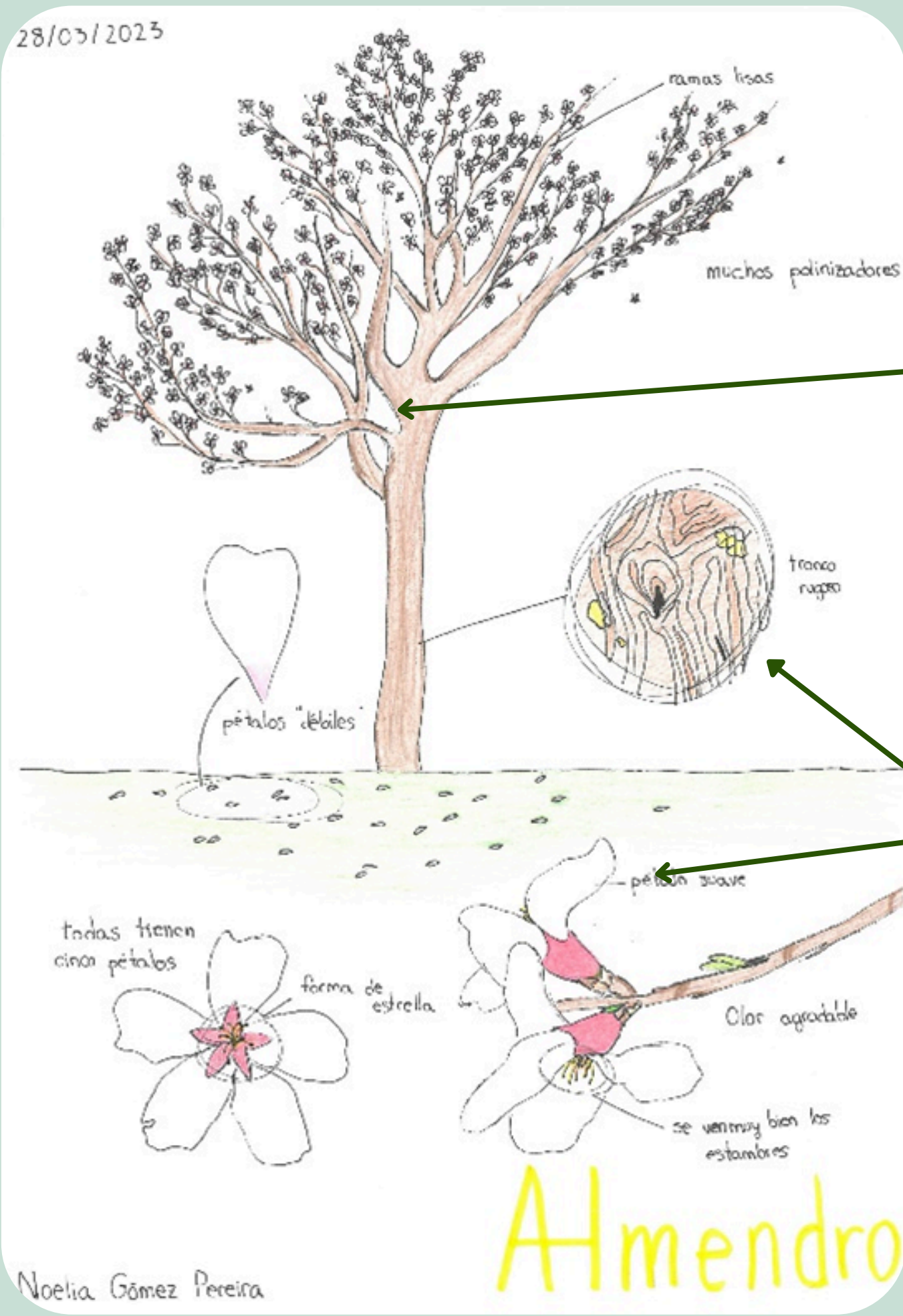


3 RESULTS

Most students chose to depict trees (23 drawings), followed by herbaceous plants (12), and shrubs (4). A strong preference for flowering plants was observed (28).



- **Use of stereotypes** (*simple images used as communicative symbols*): e.g. **flowers**, trees with a **fan-shaped canopy** spread out on a plane (a way to avoid difficulties when depicting overlapping elements).
- **Other limitations:** trunk and branch structures that **widened and narrowed arbitrarily**; excessively continuous, firm, and inexpressive lines.
- **Election of apparently easy-to-depict plants**; e.g. *Aloe vera* -but its thick, sculptural leaves involved **unexpected challenges** to convey the sense of volume-



Just 6 students were able to spontaneously incorporate some sense of volume in their drawings (overlapping branches).

Strong correlations between the ability of better depicting the details of flowers and bark, and the quality of the overall representation was detected.

For students, representing isolated parts was easier than capturing the structure and volume of whole plants.

4 DISCUSSION & CONCLUSIONS

- Capturing the volume of plants was challenging for PSTs; it resulted easier to depict the linear, less dense structure of herbaceous plants than those of flowering trees or of plants such as *Aloe vera*, apparently simpler. Line regularity is also a problem.
- To address this challenge, it is important to provide students with strategies that focus on capturing the essence of plant forms, particularly volume and density.
- Emphasizing observation techniques that focus on textures, light, and shadow can help represent complex plant structures. Linear expression exercises can be useful (Parini, 2002).
- This approach encourages students to notice, reflect on, and appreciate plant morphology and complexity, ultimately improving the attention dimension of plant awareness (Eugenio-Gozalbo et al., 2024).

5 LITERATURE CITED

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