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RECEIVED 05 March 2024
ACCEPTED 12 March 2024
PUBLISHED 27 March 2024

CITATION
Anderhag P, Caiman C, Wickman P-O and
Ainsworth S (2024) Editorial: Disciplinary
aesthetics: the role of taste and affect for
teaching and learning specific school
subjects. *Front. Educ.* 9:1396318.
doi: 10.3389/educ.2024.1396318

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Editorial: Disciplinary aesthetics: the role of taste and affect for teaching and learning specific school subjects

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KEYWORDS

methodology, interest, aesthetics, learning, school subjects

Editorial on the Research Topic

Disciplinary aesthetics: the role of taste and affect for teaching and learning specific school subjects

Aesthetics concerns, on the one hand, people's feelings of pleasure and displeasure, and, on the other hand, the objects these feelings are directed to, that is, what people find beautiful or ugly (Wickman, 2006). Traditionally aesthetics and affect have been treated as separate from cognition and only rarely has it been studied how they are intertwined when learning a specific content (Wickman et al., 2021). However, recent situated and socio-culturally oriented research has begun to elucidate how aesthetics plays a key role for selection of content, what route learning takes in the classroom and for students' opportunities to develop an interest or taste for a specific school subject (e.g., Sinclair, 2006; Ainsworth and Bell, 2020; Wickman et al., 2021). This Research Topic compiles contributions from researchers examining these topics further.

Aesthetic judgments are not just reports of inner feelings but also concern outer objects and so constitutes an evaluation of what is the case (Dewey, 1934). What beauty there is in educational settings such as mathematical inquiry (Sinclair, 2009), data modeling (Ferguson et al., 2021), writing a literary text (Gilbert, 2016), learning grammar (Ainsworth and Bell, 2020), cooking (Berg et al., 2019), a ball game (Maivorsdotter and Lundvall, 2009), or when art meets science (Hannigan et al., 2021) is a question of taste and is socially constituted, negotiated, and learnt (Bourdieu, 1984). Distinctions of taste make evident preferences of language and representations, procedures and actions, and ways-to-be as a person. Aesthetics is a question of what and whose content is included and excluded from a school subject (Anderhag et al., 2015). The goal of this Research Topic is to explore these little examined topics extensively and to widen the understanding of what may characterize a school-subject-specific aesthetics and what role it may have when teaching and learning different school subjects, separately or as integrated.

The Research Topic is grounded in the notion of *disciplinary aesthetics* (Wickman et al., 2021), that is, school-subject-specific aesthetics. It focuses on the overarching questions of what may characterize such an aesthetics and what role this may have for teaching and learning in different school subjects. Contributions to the field do not merely examine

specific school subjects, such as mathematics and history, but also studies on intersections between school subjects, as for example art and science (Caiman and Jakobson, 2019).

Ainsworth and Bell suggest that explicit grammar learning may evoke aesthetic experience as existing tacit knowledge of language is transformed into declarative knowledge, generating aesthetic-epistemic feelings of fittingness. Albuquerque and Moore suggest that additional language teaching and learning might be enhanced by framing it as “coartistry,” a site for “aesthetic, plurilingual/pluriliterate action, and interaction.” André et al. explore learning in programming, demonstrating the importance of aesthetic judgments for orienting student learning toward the movement of the programmed object and the ways to be as a programmer. Berg et al. show how aesthetic values in teaching home and consumer studies play a key role and are constituted as culinary, production, and bodily aesthetics, relating to, for example, presentation of meals, preprocessing of food and bodily consequences of eating, respectively. Ferguson and White draw on a socio-semiotic pragmatist perspective to explore the synergy between science education aesthetics and climate change aesthetics, advocating for a transformative aesthetics of climate change education. Gäfvels explores the aesthetics involved in teaching and learning floristry, providing examples of aesthetic judgements being constructed in interaction, informed by sensory knowing and communicated through embodied actions. Hannigan et al. present a mixed methodology approach to examine the role of aesthetic experiences and art for learning in marine science when children engage in a series of fieldtrips, workshops and lessons on a marine environment. Karavakou et al. present a theoretical model for analyzing students’ aesthetically driven mathematical meaning making, using empirical findings to discuss the prospect of an aesthetically oriented curriculum reform. Nemirovsky et al. draw on Rancière’s approach to aesthetics and politics and a case study of a conversation between weavers, anthropologists, and mathematics educators on the nature of knots to discuss the implications of aesthetical entanglements for mathematics learning. Prain et al. adopt Peirce’s semiotic theory of signs examining disciplinary aesthetics as enjoyment and appreciation learning within and across the two subjects drama and science. They show how students’ taste for both subjects is constituted through signs and signs systems.

The contributions within this Research Topic make both empirical and theoretical contributions to the emerging field of disciplinary aesthetics. Together they provide exploratory responses to the hitherto understudied questions:

- What are the objects (language, procedures, and persons) that are aesthetically included or excluded as part of teaching and learning the subject?

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- How can such distinctions be seen to be taught and learned as content of the subject?

Substantively, the studies provide an exploration of how the aesthetic dimensions of each of the academic subjects might be characterized, exemplifying the aesthetic experiences that may arise from engaging with particular kinds of subject content in particular ways. Methodologically, the contributions showcase a range of methods that might be used to capture such aesthetic experiences and the particular aspects of knowledge and/or learning that have the potential to evoke them. These articles provide a flexible suite of methodological and theoretical tools, which might be used in future research to broaden the field of disciplinary aesthetics to include further academic disciplines. They also yield a number of important implications for educators, including suggestions for how teachers might harness the aesthetic dimensions of particular subjects to maximize learning and engagement in the classroom. More broadly, the Research Topic argues for the role of aesthetics in education to be taken seriously, and signposts potentially fruitful avenues for future research.

Author contributions

PA: Writing – original draft, Writing – review & editing. CC: Writing – original draft, Writing – review & editing. P-OW: Writing – original draft, Writing – review & editing. SA: Writing – original draft, Writing – review & editing.

Funding

The author(s) declare that no financial support was received for the research, authorship, and/or publication of this article.

Conflict of interest

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